50145

CORRESPONDENCE/MEMORANDUM State of Wisconsin

Date: September 9, 2005

To: Mike Ostrowski
Project Development Group Manager

From: Michael Perkins
D6 Soils Engineer

Subject: Site Investigation Report – Roadway
id 7090-05-34
USH 12
(Elk Mound –STH 124)
Dunn, Chippewa and Eau Claire Counties

This report provides the results of the subsurface investigation of the subject project. The requested investigation by Randy Luedtke, D6 Pavement Design Engineer obtained pavement core depths along the subject project length. In addition, pavement design parameters are provided. Of note, the design id for the project, 7090-05-34 was changed from the initial id of 7090-05-04.

PROJECT IDENTIFICATION AND PROPOSED CONCEPTS

Project termini seem to vary in location depending on the various means to identify them. The Concept Definition Report project map, FIIPS project set-up form, and the D6 Scoping Team Project Id Map are three such resources that seem to present conflicting project termini.

While the starting point of this job is not clearly defined to the writer, this roadway site investigation covers the length of USH 12 that mirrors the scoping team map. That portion of the project is approximately 6.0 miles in length. (See attached ***D6 Scoping Team Project Id Map***).

Generally, one can expect the subject USH 12 project beginning near the western village limits of Elk Mound and ending at the STH 124 intersection. USH 12 proceeds through the Village of Elk Mound mostly in a southeasterly direction and traverses Dunn, Chippewa and Eau Claire Counties to the STH 124 intersection.

This project is scheduled for a Preventive Maintenance type of improvement. The existing pavement possesses extensive longitudinal and transverse cracking. The underlying pcc pavement is generally expected to be 20' wide. The proposed improvement will mill the existing asphalt pavement and repave to a minimum 28' width.

Cost share agreements with Elk Mound could be needed for additional work tied to this project. Potential improvements added within the village limits may include curb and gutter, roadside drainage and sidewalk. Proposed work within the Village is yet to be defined to the best of the writer's knowledge.

GENERAL GEOLOGY AND EXISTING SOIL TYPES & CHARACTERISTICS

The project consists predominantly of loamy and sandy deposits developed from upland soils and outwash plains lower in the surrounding profile. Stream terrace deposits formed along the drainage ways found along the project length.

Shallow sandstone bedrock is expected along roughly half the project 's SCS mapped soils in Dunn County. Within the village of Elk Mound, expect underlying sandstone where Norden and Northfield soils occur.

Soil descriptions and general pavement design parameters are taken from Table II of the Wisconsin Department of Transportation's Geotechnical Bulletin No. 1 and noted in the listing below.

Soil Series Name	Description	Design Group Index B	C	D	Frost Index B	C	D	Soil Support Value B	C	D
Predominant Soil Series – Outwash Plain & Stream Terrace Soils										
Meridean : (31 %)	loamy deposit over deep sands well drained	12	0	--	F3	F0	--	4.2	5.5	---
Billett : (9 %)	sandy loam over sand & gravel well drained	12	0	--	F3	F0	--	4.2	5.5	---
Upland Soils										
Northfield : (6 %)	silty clay over sandstone bedrock well drained	12	--	--	F3	--	--	3.9	--	---

Percentages noted under the soil series approximate that soil's occurrence along the project length. Copies of the ***Soil Conservation Service Maps*** showing the general location and extent of the project soils are included with this report.

GEOTECHNICAL INVESTIGATION

Central Office Geotechnical staff performed the field investigation with oversight by D6 staff. This work used a truck mounted CME model 850 drill rig for the coring work. The requested investigation along the rural portions of the project provides the asphalt pavement depths along the project. The material underlying the asphalt pavement (pcc pavement or base course) is also noted.

The project was logged at intervals every 0.5 kilometers using the Numetrics electronic measuring meter. These values were converted to English units and noted on the field log sheet. Sixteen asphalt cores were taken near the middle of the travel lanes along the project length. Asphalt depths ranged from 5 ½" to 12 ½". The asphalt core information is found on the ***Pavement Field Core Log*** attached to this report.

Additional asphalt cores were taken at three locations to provide some information of the asphalt depth near the outside edge of the travel lane and the underlying pcc pavement. The asphalt depths ranged from 6 ½" to 12". This information is included at the bottom of the ***Pavement Field Core Log***.

Photos were taken at the three additional sites along USH 12 and of the individual cores. A schematic indicating the core location with respect to the travel lane is provided for each of the sites. The digital pictures and schematics are found in the ***Photos*** attachment of this report.

RECOMMENDATIONS

Pavement Design Parameters

Recommended pavement design parameters for the project length along USH 12 are :

- Design Group Index: 12
- Soil Support Value: 4.2
- Frost Index F-3

The recommended values are conservative based on the soil pavement design parameters and the profile of the existing road within the upper portion of the soil's horizon. If the designer has additional information or background regarding the project soils, these values may warrant adjustment.

General Observations and Comments

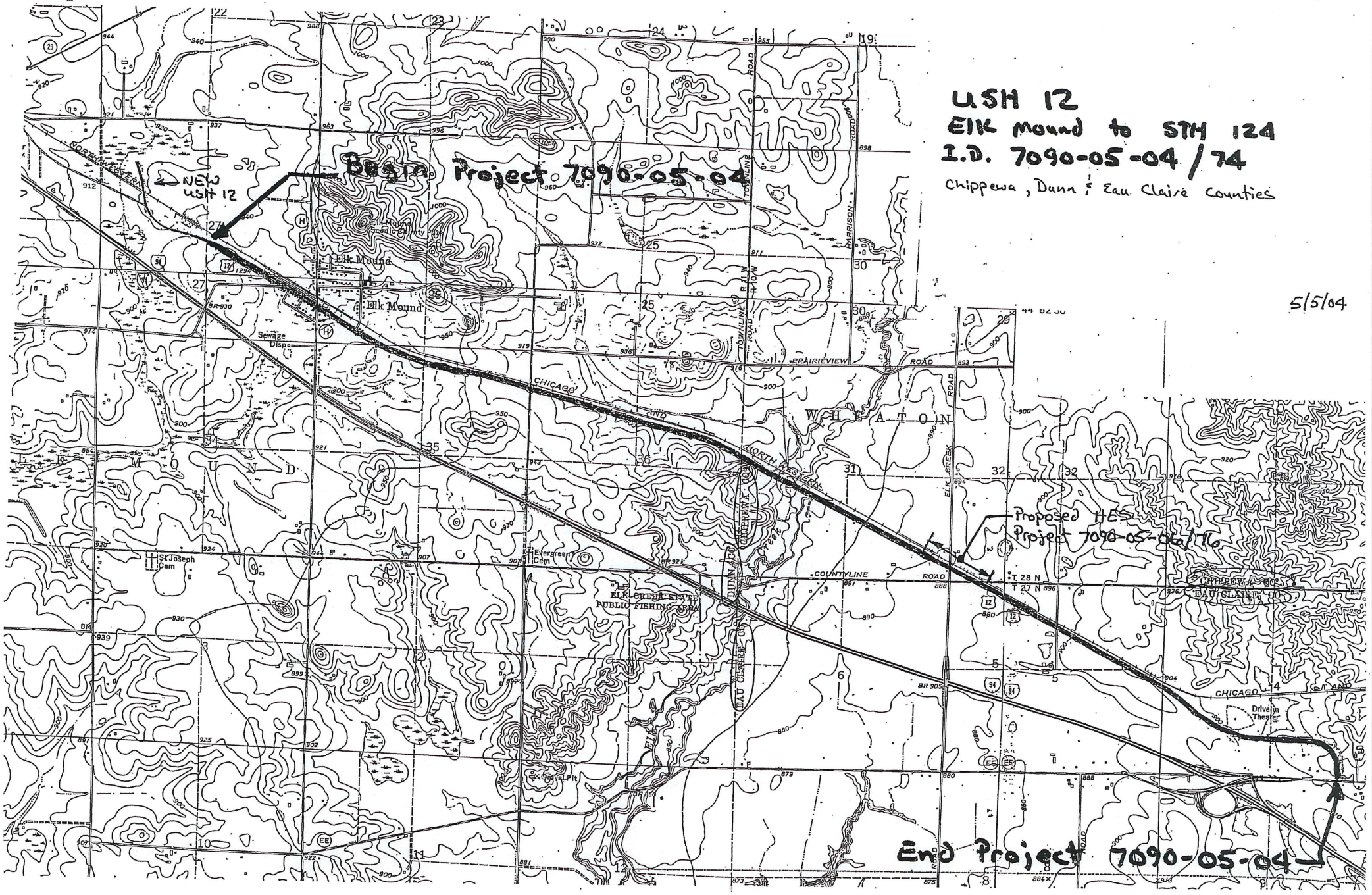
- The 12 ½" pavement core was obtained on the high side of a super elevated curve.
- Generally, the asphalt overlies 20' wide, pcc pavement. Exceptions would be cores #1 and #9 overlying base course. The structure, B-09-119 built in 1985, is located within 400' of core #9.
- Core 11A located 10' right of the centerline longitudinal crack had underlying pcc pavement. Core 11B located 11' right had underlying base course. The cores' photos serve to substantiate the type of underlying material present. The bottom of Core #11A is flat while Core #11B has a rough surface indicative of underlying base course.
- Cores #11A and #11B each had an asphalt depth of 6 ½". Of interest, note the lack of a longitudinal crack in the asphalt where the underlying pcc pavement and base course meet. (See attached ***Photos***).
- Cores #11, #11A, #11B, #12 and #12A are located in Chippewa County.
- Core #13 has a depth of 7" of asphalt located 7' right of centerline. Core #13A has a depth of 17 ½" located ± 11' right.
- Core #13 and #13A are located in Eau Claire County.

Information provided in this report is based on project information requested. It should not be used for purposes other than those stated. If changes in the nature, design, or location of the proposed improvements are made, please contact the writer for an opportunity for review and/or comment of the possible impact. Please contact the writer with any questions regarding this report.

cc: Central File
D6 Pavement Design Engineer
D6 Soils File

D6 Scoping Team

Project Id Map


USH 12
Elk Mound to STH 124
I.D. 7090-05-04 / 74
Chippewa, Dunn & Eau Claire Counties
5/5/04
Begin Project 7090-05-04
NEW USH 12
Elk Mound
Elk Mound Sewage Disp.
PRAIRIEVIEW ROAD
CHICAGO AND NORTHWESTERN
WHITEAT ON
ELK CREEK
Proposed HES Project 7090-05-04/76
COUNTYLINE ROAD
T 28 N
T 27 N
ELK CREEK STATE PUBLIC FISHING AREA
Evergreen Cem
St Joseph Cem
Drive-in Theater
End Project 7090-05-04

Soil Conservation Service Maps

The first capital letter is the initial one of the soil name. A second capital letter, A, B, C, D, E, or F, shows the slope. Most symbols without a slope letter are those of nearly level soils, but some are for land types that have a considerable range of slope. A final number, 2 or 3, in the symbol shows that the soil is eroded or severely eroded.

SYMBOL	NAME
Ad	Alluvial land, loamy
Ae	Alluvial land, sandy
Af	Alluvial land, wet
AmB	Almena silt loam, 2 to 6 percent slopes
An	Almena silt loam, wet variant
AsB	Amery loam, 2 to 6 percent slopes
AsC2	Amery loam, 6 to 12 percent slopes, eroded
AsD2	Amery loam, 12 to 20 percent slopes, eroded
At	Arenzville silt loam
AuC2	Arland sandy loam, 6 to 12 percent slopes, eroded
AuD2	Arland sandy loam, 12 to 20 percent slopes, eroded
BlA	Billett sandy loam, 0 to 2 percent slopes
BlB	Billett sandy loam, 2 to 6 percent slopes
BlC2	Billett sandy loam, 6 to 12 percent slopes, eroded
Bm	Billett sandy loam, mottled subsoil variant
Bo	Boaz silt loam
Br	Boaz silt loam, dark variant
Bs	Brems loamy sand
BuB	Burkhardt sandy loam, 0 to 6 percent slopes
BuC2	Burkhardt sandy loam, 6 to 12 percent slopes, eroded
CaA	Campia loam, 0 to 2 percent slopes
Ce	Caryville loam
Ch	Cathro muck
CkA	Chetek sandy loam, 0 to 2 percent slopes
CkB	Chetek sandy loam, 2 to 6 percent slopes
CkD2	Chetek sandy loam, 12 to 20 percent slopes, eroded
CkE2	Chetek sandy loam, 20 to 30 percent slopes, eroded
DaA	Dakota sandy loam, 0 to 2 percent slopes
DaB	Dakota sandy loam, 2 to 6 percent slopes
DbA	Dakota loam, 0 to 2 percent slopes
DbB	Dakota loam, 2 to 6 percent slopes
DdA	Dickinson sandy loam, 0 to 2 percent slopes
DdB	Dickinson sandy loam, 2 to 6 percent slopes
DfB	Dubuque silt loam, 2 to 6 percent slopes
DfC2	Dubuque silt loam, 6 to 12 percent slopes, eroded
DfD2	Dubuque silt loam, 12 to 20 percent slopes, eroded
DfE2	Dubuque silt loam, 20 to 30 percent slopes, eroded
DnB2	Dunbarton silt loam, 2 to 6 percent slopes, eroded
DnC2	Dunbarton silt loam, 6 to 12 percent slopes, eroded
DnD2	Dunbarton silt loam, 12 to 20 percent slopes, eroded
DnE	Dunbarton silt loam, 20 to 30 percent slopes
Du	Dunnville loam
Dv	Dunnville silt loam, silty subsoil variant
ElB	Eleva sandy loam, 2 to 6 percent slopes
ElC2	Eleva sandy loam, 6 to 12 percent slopes, eroded
EmA	Elkmound loam, 0 to 2 percent slopes
EmB	Elkmound loam, 2 to 6 percent slopes
EmC2	Elkmound loam, 6 to 12 percent slopes, eroded

SYMBOL	NAME
GoA	Gotham loamy fine sand, 0 to 2 percent slopes
GoB	Gotham loamy fine sand, 2 to 6 percent slopes
GoC2	Gotham loamy fine sand, 6 to 12 percent slopes, eroded
GsA	Gotham loamy fine sand, loamy substratum, 0 to 2 percent slopes
GsB	Gotham loamy fine sand, loamy substratum, 2 to 6 percent slopes
GsC2	Gotham loamy fine sand, loamy substratum, 6 to 12 percent slopes, eroded
HfB	Hixton loam, 2 to 6 percent slopes
HfC2	Hixton loam, 6 to 12 percent slopes, eroded
HfD2	Hixton loam, 12 to 20 percent slopes, eroded
HmB	Hixton loam, mottled subsoil variant, 2 to 6 percent slopes
Ho	Houghton peaty muck
HuA	Hubbard loamy sand, 0 to 2 percent slopes
HuB	Hubbard loamy sand, 2 to 6 percent slopes
HuC2	Hubbard loamy sand, 6 to 12 percent slopes, eroded
Hv	Hubbard loamy sand, loamy substratum
HwC	Hubbard sand, hummocky
Kc	Kickapoo fine sandy loam
LfB	La Farge silt loam, 2 to 6 percent slopes
LfC2	La Farge silt loam, 6 to 12 percent slopes, eroded
LfC3	La Farge silt loam, 6 to 12 percent slopes, severely eroded
LfD2	La Farge silt loam, 12 to 20 percent slopes, eroded
LfD3	La Farge silt loam, 12 to 20 percent slopes, severely eroded
LfE2	La Farge silt loam, 20 to 30 percent slopes, eroded
Lo	Lows loam
Ma	Markey muck
Mc	Marshan silt loam
MeA	Meridian loam, 0 to 2 percent slopes
MeB	Meridian loam, 2 to 6 percent slopes
MeC2	Meridian loam, 6 to 12 percent slopes, eroded
Mo	Morocco loamy sand
Mr	Morocco sandy loam, loamy subsoil variant
Ne	Newton loamy sand
NrB	Norden silt loam, 2 to 6 percent slopes
NrC2	Norden silt loam, 6 to 12 percent slopes, eroded
NrD2	Norden silt loam, 12 to 20 percent slopes, eroded
NrE2	Norden silt loam, 20 to 30 percent slopes, eroded
NtA	Northfield silt loam, 0 to 2 percent slopes
NtB	Northfield silt loam, 2 to 6 percent slopes
NtC2	Northfield silt loam, 6 to 12 percent slopes, eroded
OsB	Otterholt silt loam, 2 to 6 percent slopes
OsC2	Otterholt silt loam, 6 to 12 percent slopes, eroded

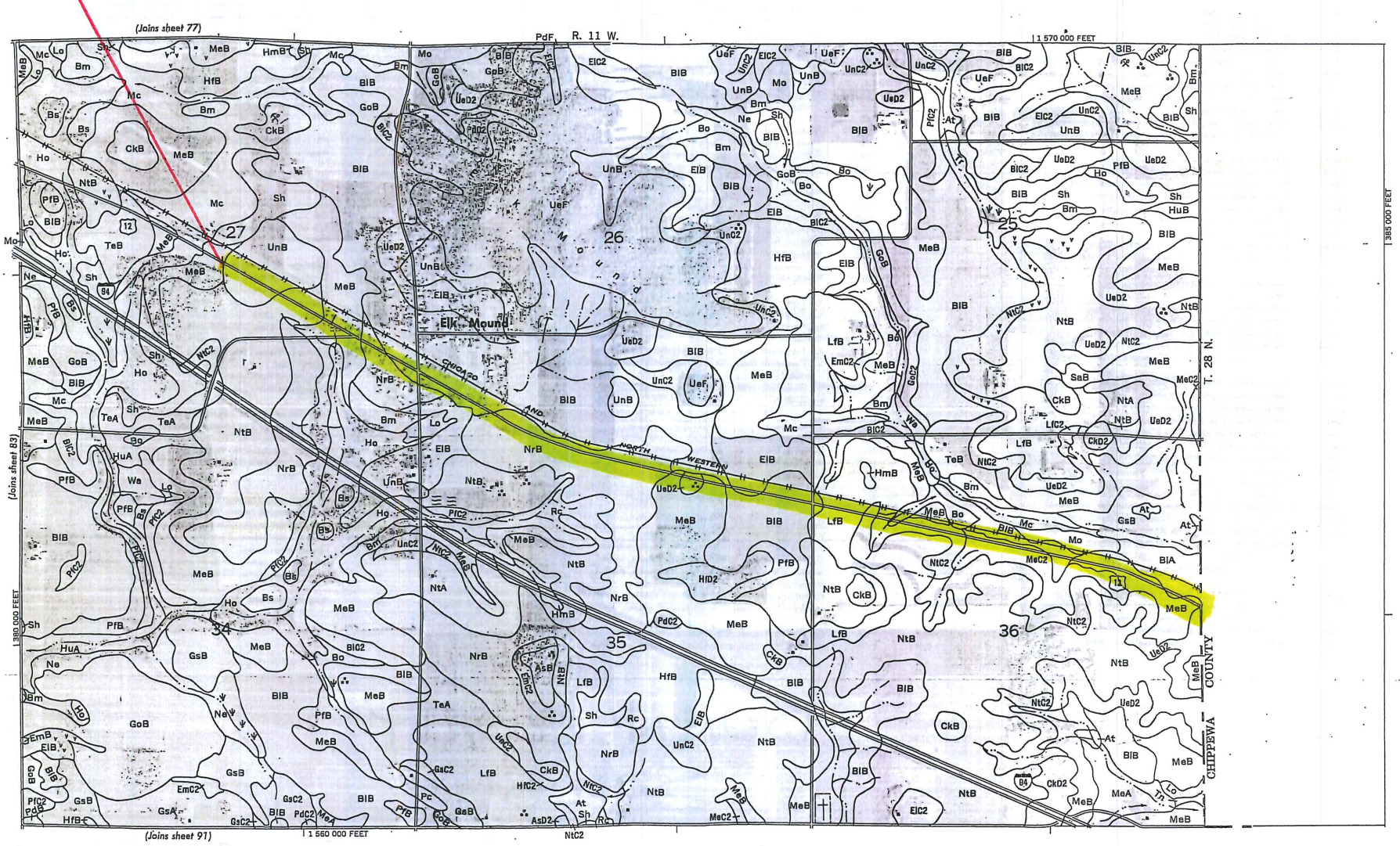
SYMBOL	NAME
PaB	Palsgrove silt loam, deep, 2 to 6 percent slopes
PaC2	Palsgrove silt loam, deep, 6 to 12 percent slopes, eroded
PaD2	Palsgrove silt loam, deep, 12 to 20 percent slopes, eroded
Pc	Pillot silt loam
PdB	Plainbo loamy sand, 2 to 6 percent slopes
PdC2	Plainbo loamy sand, 6 to 12 percent slopes, eroded
PdF	Plainbo loamy sand, 12 to 40 percent slopes
PfA	Plainfield loamy sand, 0 to 2 percent slopes
PfB	Plainfield loamy sand, 2 to 6 percent slopes
PfC2	Plainfield loamy sand, 6 to 12 percent slopes, eroded
Po	Poskin silt loam
RaB	Renova silt loam, 2 to 6 percent slopes
RaC2	Renova silt loam, 6 to 12 percent slopes, eroded
RaD2	Renova silt loam, 12 to 20 percent slopes, eroded
Rb	Rib silt loam
Rc	Rib silt loam, moderately shallow variant
Re	Riverwash
SaB	Santiago silt loam, 2 to 6 percent slopes
SaC2	Santiago silt loam, 6 to 12 percent slopes, eroded
SeB	Seaton silt loam, 2 to 6 percent slopes
SeC2	Seaton silt loam, 6 to 12 percent slopes, eroded
SeD2	Seaton silt loam, 12 to 20 percent slopes, eroded
SeE2	Seaton silt loam, 20 to 30 percent slopes, eroded
SfA	Seaton silt loam, benches, 0 to 2 percent slopes
SfB	Seaton silt loam, benches, 2 to 6 percent slopes
Sh	Shiffer loam
StF	Steep stony rock land
Su	Stronghurst silt loam
TeA	Tell silt loam, 0 to 2 percent slopes
TeB	Tell silt loam, 2 to 6 percent slopes
TeC2	Tell silt loam, 6 to 12 percent slopes, eroded
Tn	Terrace escarpments, sandy
To	Terrace escarpments, loamy
Tr	Terril loam
UeD2	Urne-Elkmound loams, 12 to 20 percent slopes, eroded
UeF	Urne-Elkmound loams, 20 to 40 percent slopes
UnB	Urne-Norden loams, 2 to 6 percent slopes
UnC2	Urne-Norden loams, 6 to 12 percent slopes, eroded
UnD2	Urne-Norden loams, 12 to 20 percent slopes, eroded
UnE2	Urne-Norden loams, 20 to 30 percent slopes, eroded
UnF	Urne-Norden loams, 30 to 45 percent slopes
Wa	Wallkill silt loam

DUNN COUNTY SOILS

7090-05-34
USH 12
DUNN, CHIPPEWA &

BEGIN

DUNN COUNTY, WISCONSIN — SHEET NUMBER 84



1 ¾ ½ ¼ 0 1 Mile

5000 4000 3000 2000 1000 0 5000 Feet

Scale 1:15840

Photobase from 1970 aerial photography. Positions of 5,000-foot grid

having names that begin with the same letter, except that it does not separate sloping or eroded phases. The second capital letter indicates the class of slope. Symbols without a slope letter are for nearly level soils or miscellaneous areas. A final number of 2 indicates that the soil is eroded.

SYMBOL	NAME
AfB	Alban fine sandy loam, 2 to 6 percent slopes
AfC	Alban fine sandy loam, 6 to 12 percent slopes
AgB	Almena silt loam, 1 to 6 percent slopes
AlB	Amery sandy loam, 2 to 6 percent slopes
AlC	Amery sandy loam, 6 to 12 percent slopes
AlD	Amery sandy loam, 12 to 25 percent slopes
AlF	Amery sandy loam, 25 to 45 percent slopes
AnB	Antigo silt loam, 1 to 6 percent slopes
AnC2	Antigo silt loam, 6 to 12 percent slopes, eroded
AoA	Arenzville silt loam, 0 to 3 percent slopes
ApB	Arland sandy loam, 2 to 6 percent slopes
ApC2	Arland sandy loam, 6 to 12 percent slopes, eroded
ApD2	Arland sandy loam, 12 to 20 percent slopes, eroded
AsB	Arland loam, 2 to 6 percent slopes
AsC2	Arland loam, 6 to 12 percent slopes, eroded
AsD2	Arland loam, 12 to 20 percent slopes, eroded
Au	Auburndale silt loam, 0 to 2 percent slopes
Ba	Barronett silt loam, 0 to 2 percent slopes
Bb	Barronett mucky silt loam, ponded, 0 to 2 percent slopes
Be	Beseman muck, 0 to 1 percent slopes
BlA	Billett sandy loam, 0 to 2 percent slopes
BlB	Billett sandy loam, 2 to 6 percent slopes
BlC2	Billett sandy loam, 6 to 12 percent slopes, eroded
BmA	Billett sandy loam, moderately well drained, 0 to 3 percent slopes
BoE	Boone fine sand, 20 to 45 percent slopes
BpA	Brill silt loam, 0 to 3 percent slopes
BuA	Burkhardt sandy loam, 0 to 3 percent slopes
Cb	Cable silt loam, 0 to 2 percent slopes
CdB	Campia silt loam, 2 to 6 percent slopes
CdC2	Campia silt loam, 6 to 12 percent slopes, eroded
CdD2	Campia silt loam, 12 to 20 percent slopes, eroded
CeA	Caryville sandy loam, 0 to 3 percent slopes
CkA	Chetek sandy loam, 0 to 2 percent slopes
CkB	Chetek sandy loam, 2 to 6 percent slopes
CkC2	Chetek sandy loam, 6 to 12 percent slopes, eroded
CkD2	Chetek-Mahtomedi complex, 12 to 25 percent slopes, eroded
CkE	Chetek-Mahtomedi complex, 25 to 40 percent slopes
Cm	Comstock silt loam, 0 to 2 percent slopes
CuA	Crystal Lake silt loam, 0 to 3 percent slopes
ElB	Eleva sandy loam, 2 to 6 percent slopes
ElC2	Eleva sandy loam, 6 to 12 percent slopes, eroded
ElD2	Eleva sandy loam, 12 to 20 percent slopes, eroded
EmB	Elkmound loam, 2 to 6 percent slopes
EmC2	Elkmound loam, 6 to 12 percent slopes, eroded
EmD2	Elkmound loam, 12 to 20 percent slopes, eroded
EmE	Elkmound loam, 20 to 45 percent slopes
Eo	Elm Lake loamy sand, 0 to 2 percent slopes
FaB	Fallcreek sandy loam, 2 to 6 percent slopes
FbB	Flambeau loam, 2 to 6 percent slopes
FbC2	Flambeau loam, 6 to 12 percent slopes, eroded
Fm	Fordum loam, 0 to 2 percent slopes
FnB	Freeon silt loam, 2 to 6 percent slopes
FnC2	Freeon silt loam, 6 to 12 percent slopes, eroded
FrA	Friendship loamy sand, 0 to 3 percent slopes
GaB	Gale silt loam, 2 to 6 percent slopes
GaC2	Gale silt loam, 6 to 12 percent slopes, eroded
GaD2	Gale silt loam, 12 to 20 percent slopes, eroded
Gr	Greenwood peat, 0 to 1 percent slopes
Ha	Halder loam, 0 to 2 percent slopes
HeB	Hiles silt loam, 2 to 6 percent slopes
HfB	Hiles Variant loam, 2 to 8 percent slopes
HnB	Hixton loam, 2 to 6 percent slopes
HnC2	Hixton loam, 6 to 12 percent slopes, eroded
HuB	Humbird sandy loam, 2 to 6 percent slopes
HuC2	Humbird sandy loam, 6 to 12 percent slopes, eroded
KeB	Kert silt loam, 1 to 6 percent slopes

SYMBOL	NAME
La	Lows loam, 0 to 2 percent slopes
LoB	Loyal silt loam, 2 to 6 percent slopes
LoC2	Loyal silt loam, 6 to 12 percent slopes, eroded
Lp	Lupton muck, 0 to 1 percent slopes
MbB	Magnor silt loam, 1 to 6 percent slopes
McB	Magnor silt loam, 1 to 6 percent slopes, stony
MdB	Mahtomedi loamy sand, 2 to 6 percent slopes
MdC	Mahtomedi loamy sand, 6 to 12 percent slopes
Me	Markey muck, 0 to 1 percent slopes
Mh	Meehan loamy sand, 0 to 2 percent slopes
MkB	Menahga loamy sand, 0 to 6 percent slopes
MkC	Menahga loamy sand, 6 to 12 percent slopes
MlA	Meridian loam, 0 to 2 percent slopes
MlB	Meridian loam, 2 to 6 percent slopes
MmA	Meridian loam, moderately well drained, 0 to 3 percent slopes
MrB	Merrillan sandy loam, 1 to 6 percent slopes
Mu	Minocqua loam, 0 to 2 percent slopes
MvA	Moundville loamy sand, 0 to 3 percent slopes
Na	Newson loamy sand, 0 to 2 percent slopes
NtB	Northfield silt loam, 2 to 6 percent slopes
NtC2	Northfield silt loam, 6 to 12 percent slopes, eroded
NtD2	Northfield silt loam, 12 to 20 percent slopes, eroded
Oe	Oesterle sandy loam, 0 to 2 percent slopes
Or	Orion silt loam, 0 to 2 percent slopes
OsC2	Otterholt silt loam, 6 to 12 percent slopes, eroded
Pc	Pits, gravel
PdB	Plainbo loamy sand, 2 to 6 percent slopes
PdC	Plainbo loamy sand, 6 to 12 percent slopes
PdD	Plainbo loamy sand, 12 to 20 percent slopes
Pv	Plover silt loam, 0 to 2 percent slopes
Px	Poskin silt loam, 0 to 2 percent slopes
Rb	Rib silt loam, 0 to 2 percent slopes
Rc	Rib mucky silt loam, ponded, 0 to 2 percent slopes
RfA	Richford loamy sand, 0 to 3 percent slopes
RoA	Rosholt sandy loam, 0 to 2 percent slopes
RoB	Rosholt sandy loam, 2 to 6 percent slopes
RoC2	Rosholt sandy loam, 6 to 12 percent slopes, eroded
RpA	Rosholt loam, 0 to 2 percent slopes
RpB	Rosholt loam, 2 to 6 percent slopes
RpC2	Rosholt loam, 6 to 12 percent slopes, eroded
SaB	Santiago silt loam, 2 to 6 percent slopes
SaC2	Santiago silt loam, 6 to 12 percent slopes, eroded
SaD2	Santiago silt loam, 12 to 20 percent slopes, eroded
SbA	Sattre loam, 0 to 3 percent slopes
ScB	Scott Lake sandy loam, 1 to 6 percent slopes
SdA	Scott Lake loam, 0 to 3 percent slopes
SeB	Seaton silt loam, 2 to 6 percent slopes
SeC2	Seaton silt loam, 6 to 12 percent slopes, eroded
SeD2	Seaton silt loam, 12 to 25 percent slopes, eroded
SfA	Seaton silt loam, moderately well drained, 0 to 3 percent slopes
SgA	Seaton silt loam, sandy substratum, 0 to 2 percent slopes
SgB	Seaton silt loam, sandy substratum, 2 to 6 percent slopes
Sm	Seelyeville muck, 0 to 1 percent slopes
So	Shiffer loam, 0 to 2 percent slopes
SrB	Spencer silt loam, 2 to 6 percent slopes
SrC2	Spencer silt loam, 6 to 12 percent slopes, eroded
SsA	Spencer silt loam, gravelly substratum, 0 to 2 percent slopes
SsB	Spencer silt loam, gravelly substratum, 2 to 6 percent slopes
TeB	Tell silt loam, 1 to 6 percent slopes
Ud	Udifluvents, loamy, nearly level
Ve	Vesper silt loam, 0 to 2 percent slopes
Wb	Warman Variant sandy loam, 0 to 2 percent slopes
WeB	Withee silt loam, 1 to 6 percent slopes

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- County
- Field sheet matchline & neatline

AD-HOC BOUNDARY

- Small airport, cemetery — Davis Airstrip; FLOOD POOL LINE

STATE COORDINATE TICK

LAND DIVISION CORNERS (sections and land grants)

ROADS

- Divided
- Other roads

ROAD EMBLEMS & DESIGNATIONS

- Federal — 410
- State — 52
- County — 378

RAILROAD

LEVEES

- Without road
- With road

DAMS

- Large
- Medium or small — water

PITS

- Gravel pit
- quarry

MISCELLANEOUS CULTURAL FEATURES

- Farmstead
- Church
- School

WATER FEATURES

DRAINAGE

- Perennial, double line
- Perennial, single line
- Intermittent
- Drainage end
- Drainage ditch

LAKES, PONDS AND RESERVOIRS

- Perennial — water
- Intermittent — int

MISCELLANEOUS WATER FEATURES

- Spring
- Wet spot

SPECIAL SYMBOLS FOR SOIL SURVEY

SOIL DELINEATIONS AND SYMBOLS — CeA

ESCARPMENTS

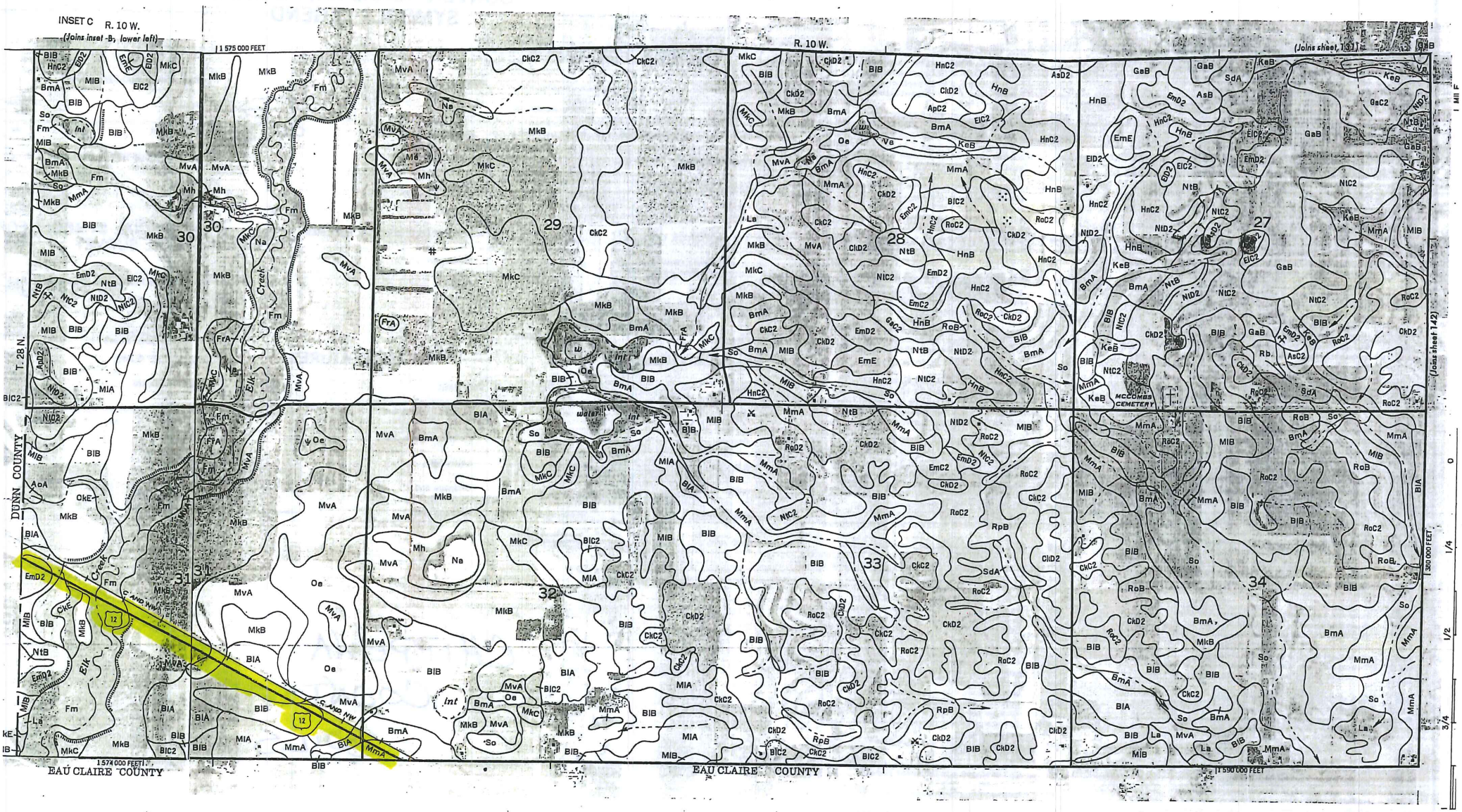
- Other than bedrock (points down slope)

SHORT STEEP SLOPE

MISCELLANEOUS

- Blowout
- Cut and fill
- Gravelly spot
- Rock outcrop
- Sandy spot
- Sanitary landfill
- very stony spot

CHIPPEWA COUNTY SOILS


INSET C
R. 10 W.
(Joins inset B, lower left)
1 575 000 FEET
R. 10 W.
(Joins sheet 131)
T. 28 N.
DUNN COUNTY
EAU CLAIRE COUNTY
EAU CLAIRE COUNTY
1 574 000 FEET
1 590 000 FEET
380 000 FEET
(Joins sheet 142)
1 MILE
0
1/4
1/2
3/4
30
29
28
27
31
32
33
34
Elk Creek
C. AND NW.
12
McCOMBS CEMETERY
water
int

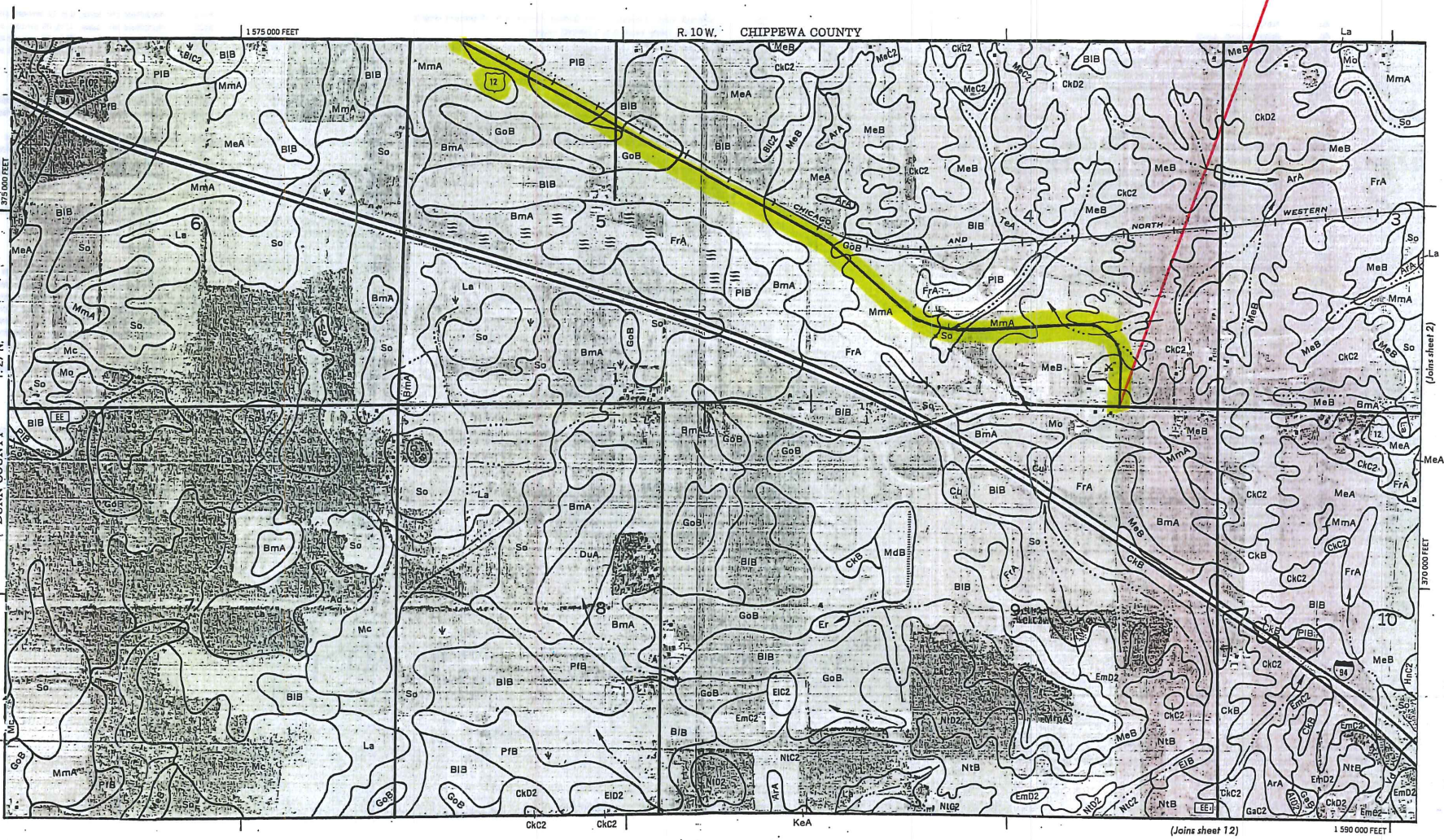
The first capital letter is the initial one of the soil name. The lower case letter that follows separates mapping units having names that begin with the same letter except that it does not separate sloping and eroded phases. A second capital letter (A, B, C, D, E or F) indicates the slope. Except for Terrace escarpments, sandy (a miscellaneous land type), symbols without a slope letter are for soils that are nearly level. A final number 2 in a symbol shows that soils are eroded.

SYMBOL	NAME
Ad	Adrian muck
Ae	Alluvial land, sandy
Af	Alluvial land, wet
ArA	Arenzville silt loam, 0 to 3 percent slopes
AtB	Arland sandy loam, 2 to 6 percent slopes
AtC2	Arland sandy loam, 6 to 12 percent slopes, eroded
AtD2	Arland sandy loam, 12 to 20 percent slopes, eroded
Au	Au Gres loamy sand
BlB	Billett sandy loam, 1 to 6 percent slopes
BlC2	Billett sandy loam, 6 to 12 percent slopes, eroded
BlD2	Billett sandy loam, 12 to 20 percent slopes, eroded
BmA	Billett sandy loam, moderately well drained, 0 to 3 percent slopes
BoB	Boone-Plainbo complex, 2 to 6 percent slopes
BoC	Boone-Plainbo complex, 6 to 12 percent slopes
BoE	Boone-Plainbo complex, 12 to 45 percent slopes
BuA	Burkhardt sandy loam, 0 to 3 percent slopes
Cb	Cable loam
CeA	Caryville loam, 0 to 3 percent slopes
CkB	Chetek sandy loam, 1 to 6 percent slopes
CkC2	Chetek sandy loam, 6 to 12 percent slopes, eroded
CkD2	Chetek sandy loam, 12 to 20 percent slopes, eroded
Cu	Curran silt loam
DaA	Dakota loam, 0 to 3 percent slopes
De	Dells silt loam
DuA	Dunnville sandy loam, 0 to 3 percent slopes
ElB	Eleva sandy loam, 2 to 6 percent slopes
ElC2	Eleva sandy loam, 6 to 12 percent slopes, eroded
ElD2	Eleva sandy loam, 12 to 20 percent slopes, eroded
EmB	Elkmound loam, 2 to 6 percent slopes
EmC2	Elkmound loam, 6 to 12 percent slopes, eroded
EmD2	Elkmound loam, 12 to 20 percent slopes, eroded
EmE	Elkmound loam, 20 to 45 percent slopes
Eo	Elm Lake loamy sand
Er	Ettrick silt loam
FmA	Fairchild and Merrillan soils, 0 to 2 percent slopes
FmB	Fairchild and Merrillan soils, 2 to 6 percent slopes
FoA	Fallcreek sandy loam, 0 to 2 percent slopes
FoB	Fallcreek sandy loam, 2 to 6 percent slopes
FpB	Fallcreek loam, moderately well drained variant, 2 to 6 percent slopes
FpC	Fallcreek loam, moderately well drained variant, 6 to 12 percent slopes
FrA	Friendship loamy sand, 0 to 3 percent slopes
GaB	Gale silt loam, 2 to 6 percent slopes
GaC2	Gale silt loam, 6 to 12 percent slopes, eroded
GaD2	Gale silt loam, 12 to 20 percent slopes, eroded
GaE	Gale silt loam, 20 to 30 percent slopes
GoB	Gotham loamy sand, 1 to 6 percent slopes
GoC2	Gotham loamy sand, 6 to 12 percent slopes, eroded
GsB	Gotham loamy sand, sandstone substratum, 2 to 6 percent slopes
GsC2	Gotham loamy sand, sandstone substratum, 6 to 12 percent slopes, eroded
HeC2	Hiles silt loam, 6 to 12 percent slopes, eroded
HkB	Hiles and Kert soils, 2 to 6 percent slopes
HnB	Hixton loam, 2 to 6 percent slopes
HnC2	Hixton loam, 6 to 12 percent slopes, eroded
HnD2	Hixton loam, 12 to 20 percent slopes, eroded
Ho	Houghton muck
KeA	Kert loam, 0 to 3 percent slopes
La	Lows loam
LuB	Ludington and Humbird soils, 2 to 6 percent slopes
LuC	Ludington and Humbird soils, 6 to 12 percent slopes
Ma	Markey muck
Mc	Marshan loam
MdB	Menahga sand, 1 to 6 percent slopes
MdC	Menahga sand, 6 to 12 percent slopes
MeA	Meridian loam, 0 to 2 percent slopes
MeB	Meridian loam, 2 to 6 percent slopes
MeC2	Meridian loam, 6 to 12 percent slopes, eroded
MmA	Meridian loam, moderately well drained, 0 to 3 percent slopes
Mo	Morocco loamy sand
MrB	Mt. Carroll silt loam, 2 to 6 percent slopes
MrC2	Mt. Carroll silt loam, 6 to 12 percent slopes, eroded
Ms	Mt. Carroll silt loam, benches
Na	Newson loamy sand
NrC2	Norden silt loam, 6 to 12 percent slopes, eroded
NrD2	Norden silt loam, 12 to 20 percent slopes, eroded
NrE2	Norden silt loam, 20 to 30 percent slopes, eroded
NtB	Northfield silt loam, 2 to 6 percent slopes
NtC2	Northfield silt loam, 6 to 12 percent slopes, eroded
NtD2	Northfield silt loam, 12 to 20 percent slopes, eroded
NtE2	Northfield silt loam, 20 to 30 percent slopes, eroded
NtF	Northfield silt loam, 30 to 45 percent slopes
On	Orion silt loam
Or	Otter silt loam, overwash
OsB	Otterholt silt loam, 2 to 6 percent slopes
OsC2	Otterholt silt loam, 6 to 12 percent slopes, eroded
PcB	Pillot silt loam, 2 to 6 percent slopes
PdB	Plainbo loamy sand, 2 to 6 percent slopes
PdC2	Plainbo loamy sand, 6 to 12 percent slopes, eroded
PfB	Plainfield loamy sand, 1 to 6 percent slopes
PfC2	Plainfield loamy sand, 6 to 12 percent slopes, eroded
PlB	Plainfield loamy sand, loamy substratum, 1 to 6 percent slopes
PlC2	Plainfield loamy sand, loamy substratum, 6 to 12 percent slopes, eroded
Re	Riverwash
SeB	Seaton silt loam, 2 to 6 percent slopes
SeC2	Seaton silt loam, 6 to 12 percent slopes, eroded
SeD2	Seaton silt loam, 12 to 20 percent slopes, eroded
SeE2	Seaton silt loam, 20 to 30 percent slopes, eroded
SfB	Seaton silt loam, benches, 2 to 6 percent slopes
SmA	Seaton silt loam, moderately well drained, 0 to 2 percent slopes
SmB	Seaton silt loam, moderately well drained, 2 to 6 percent slopes
So	Shiffer loam
SpB	Sparta loamy sand, 1 to 6 percent slopes
TeA	Tell silt loam, 0 to 2 percent slopes
TeB	Tell silt loam, 2 to 6 percent slopes
Tn	Terrace escarpments, sandy
TrB	Trempe loamy sand, 1 to 6 percent slopes
UnD2	Urne very fine sandy loam, 12 to 20 percent slopes, eroded
UnE	Urne very fine sandy loam, 20 to 45 percent slopes
Vd	Veedum silt loam
Ve	Vesper loam
VlB	Vilas sand, 1 to 6 percent slopes
Wh	Whitehall silt loam, deep variant

EAU CLAIRE COUNTY SOILS

EAU CLAIRE COUNTY, WISCONSIN — SHEET NUMBER 1

END



Pavement Field Core Log

Pavement
Field Core Log

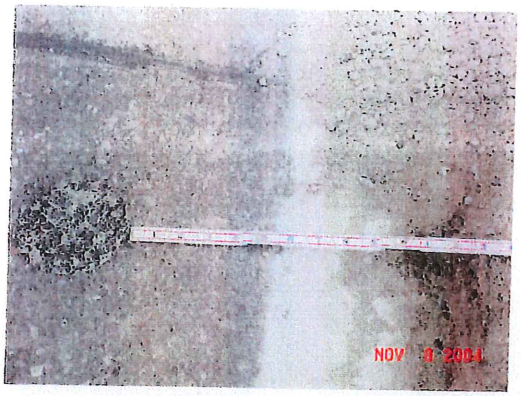
Project	Road		
7090-05-04	USH 12 (ELK MOUND-EAU CLAIRE)		
County DUNN, CHIPPEWA, AND EAU CLAIRE	District 6	Date 10/20/04	Page 1 of 1
other			

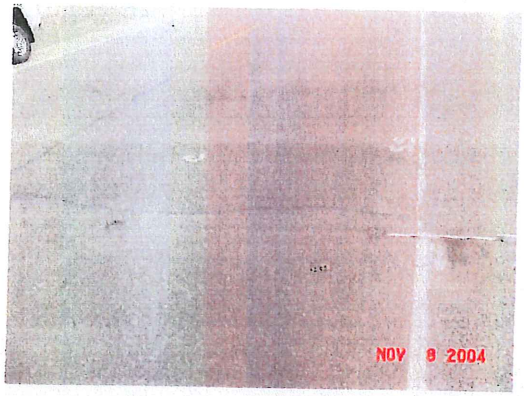
Numetrics odometer reading (km)

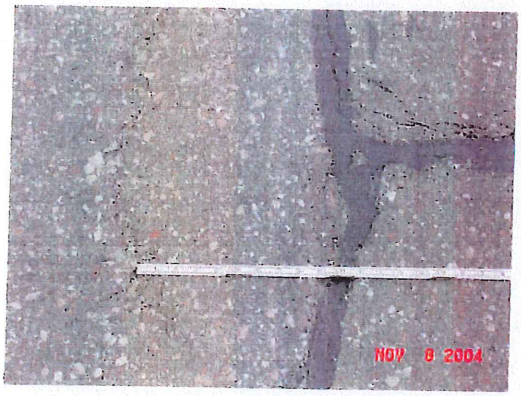
	Core No.	Sta/Mile	Off Set	Pavement Thickness	Base Thickness	Comments/Subgrade
	—	0.0		—	—	BEGIN OLD ASPHALT PAVT
	—	0.03	—	—	—	ELK MOUND VILLAGE LIMITS SIGN
0.5	1	0.3	6' RT	9	BASE	
	—	0.58	—	—	—	CTH "H"
1.0	2	0.6	7' LT	5 1/2	PCC	
1.5	3	0.9	5' RT	7 3/4	PCC	near Elk Mound eastern village limits
2.0	4	1.2	6' LT	6"	PCC	
25	5	1.5	6' RT	6 1/2"	PCC	
3.0	6	1.9	7' LT	7 1/2"	PCC	
3.5	7	2.2	6' RT	8"	PCC	
4.0	8	2.5	7' LT	12 1/2"	PCC	on high side of super
	—	2.67	—	—	—	DUNN & CHIPPEWA COUNTY LINE
4.5	9	2.8	6' RT	5 1/2	BASE	
	—	2.86	—	—	—	BRIDGE
5.0	10	3.1	6' LT	7 3/4"	PCC	
5.5	11	3.4	6' RT	7 1/4"	PCC	
6.0	12	3.7	6' LT	7 1/4"	PCC	
	—	3.88	—	—	—	CHIPPEWA & EAU CLAIRE COUNTY LINE
6.5	13	4.0	7' RT	7"	PCC	
7.0	14	4.4	6' LT	7"	PCC	
7.5	15	4.7	6' RT	7 1/4	PCC	
8.0	16	5.0	6' LT	8"	PCC	
	—	5.10	—	—	—	END RED SEAL COAT / BEGIN "NEWER" ASPHALT PAVT
	—	5.11	—	—	—	Margaret Ln / RT
	—	5.79	—	—	—	begin curb & gutter
	—	5.87	—	—	—	END ASPHALT / BEGIN PCC PAVT
5.5	11A	3.4	10' RT	6 1/2"	PCC	
5.5	11B	3.4	11' RT	6 1/2"	BASE	
6.0	12A	3.7	11' LT	6 1/2	BASE	
6.5	13A	4.0	11' RT	17 1/2"	BASE	

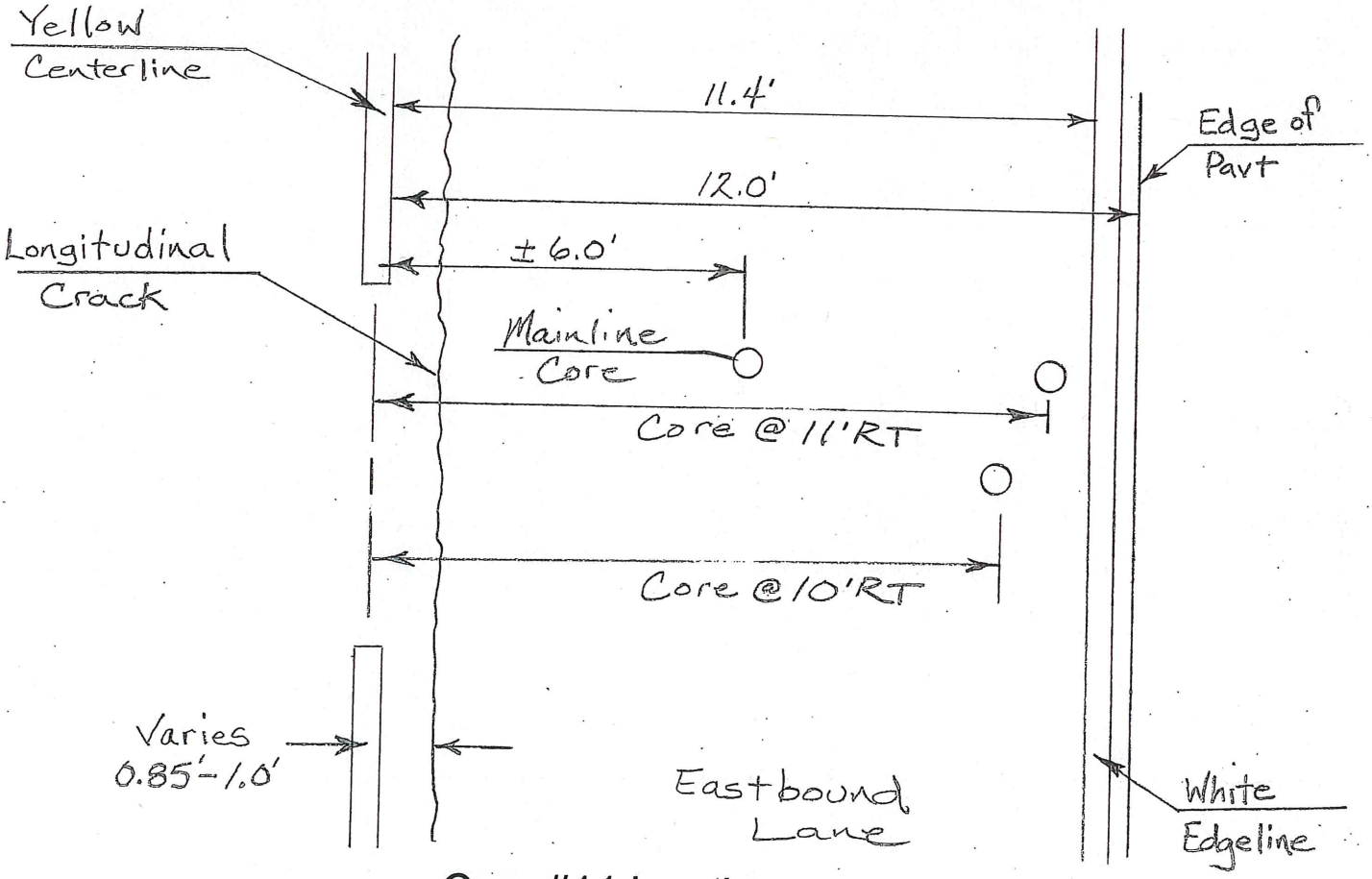
Photos

Core # 11 location
had cores taken at
10' RT and 11' RT

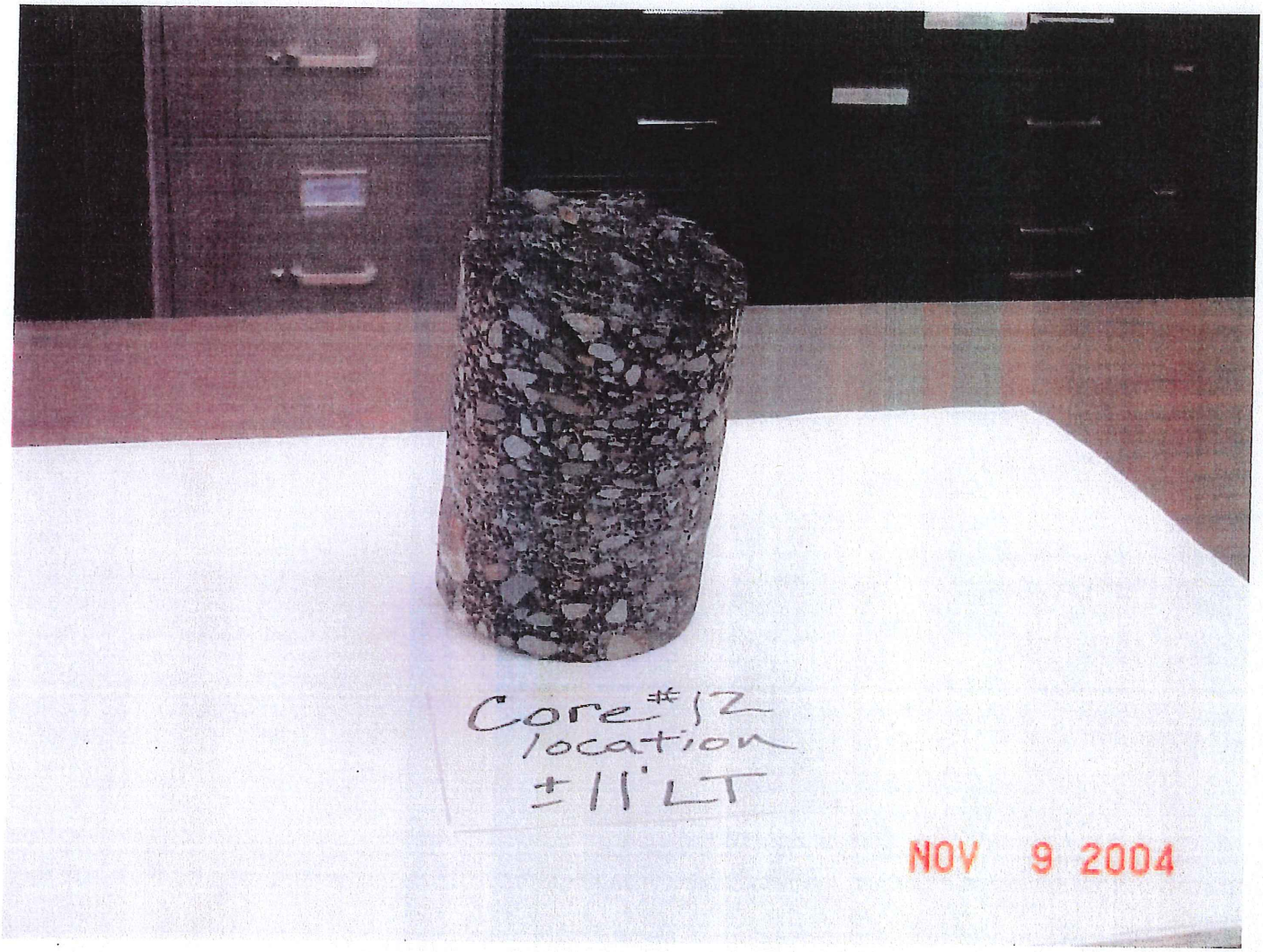




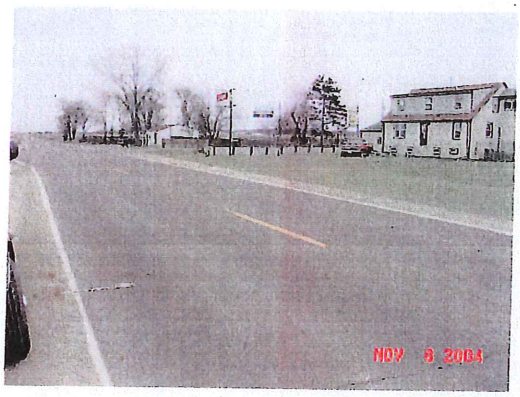


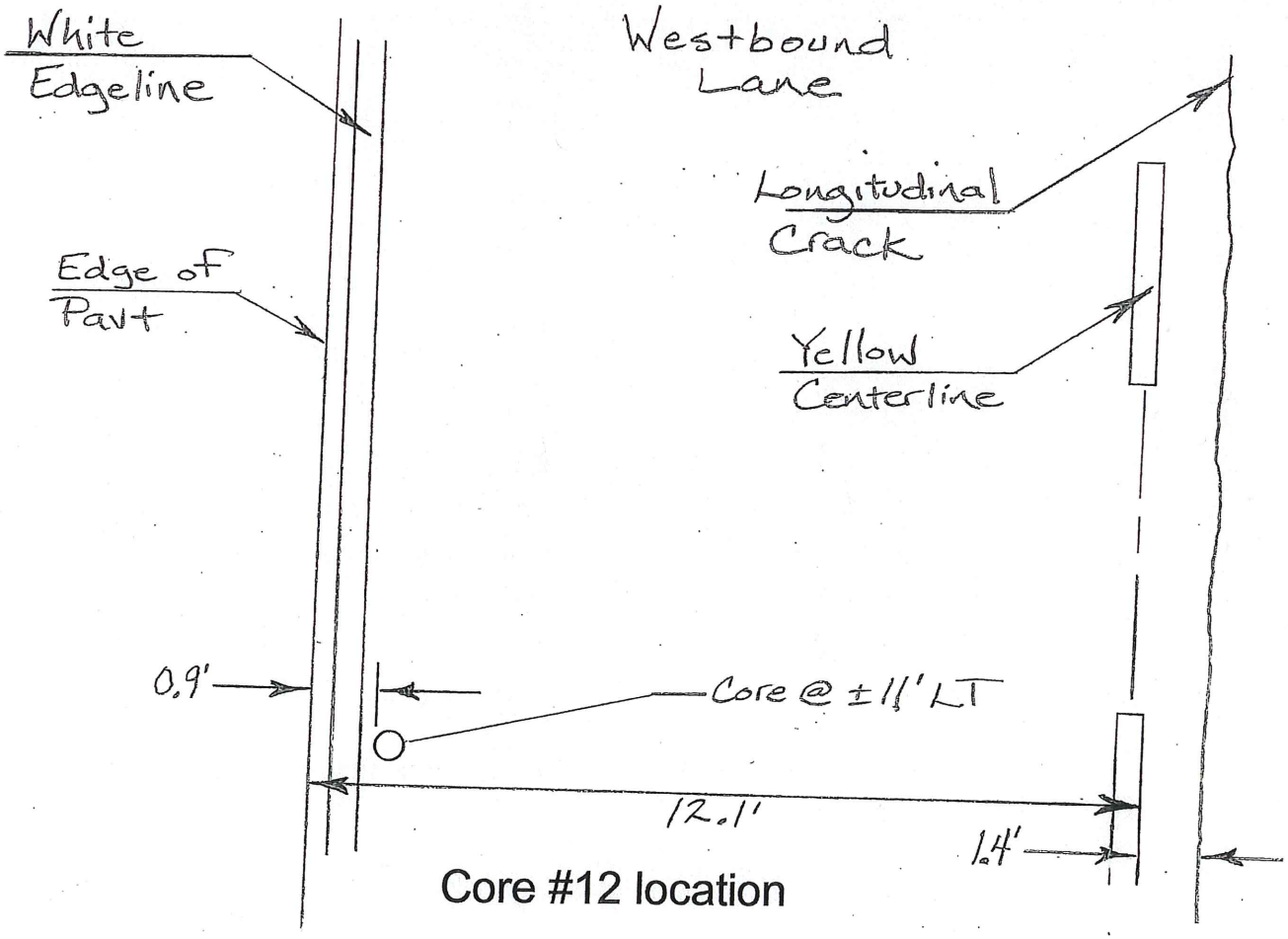


Core #11 location

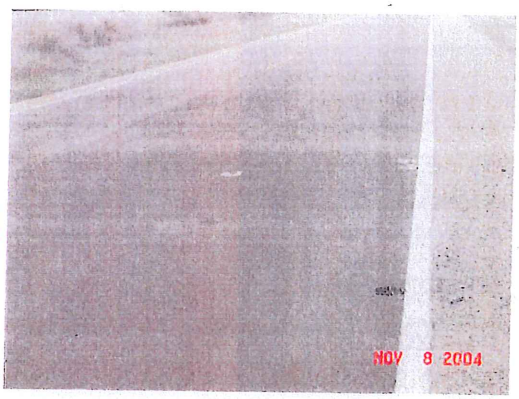


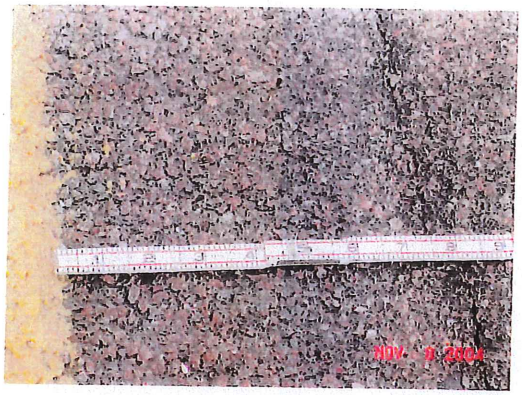
Core #12 location
taken 11' LT

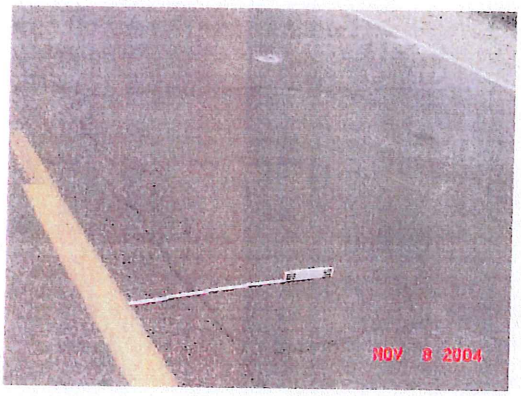


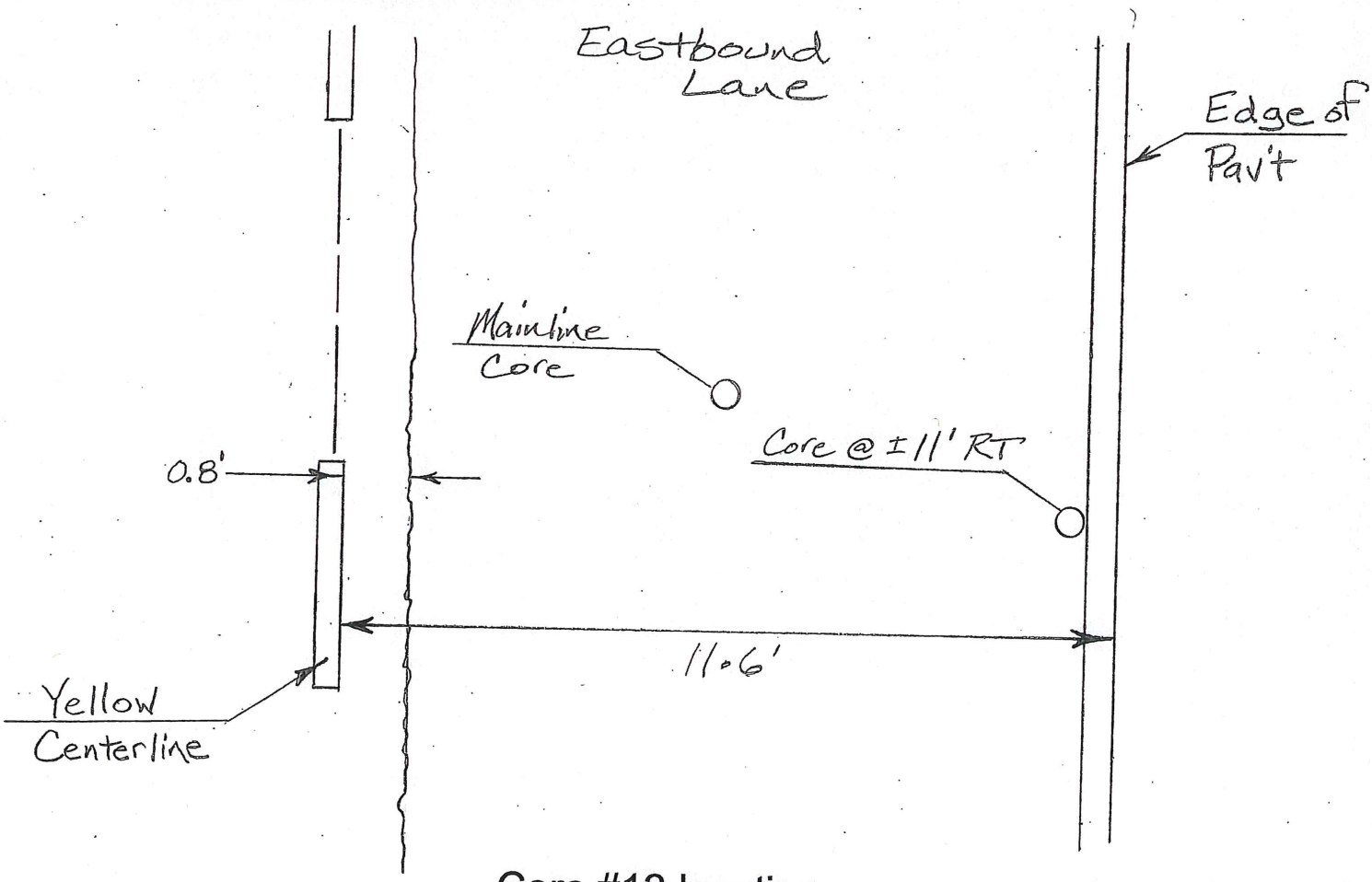


Core #12 location

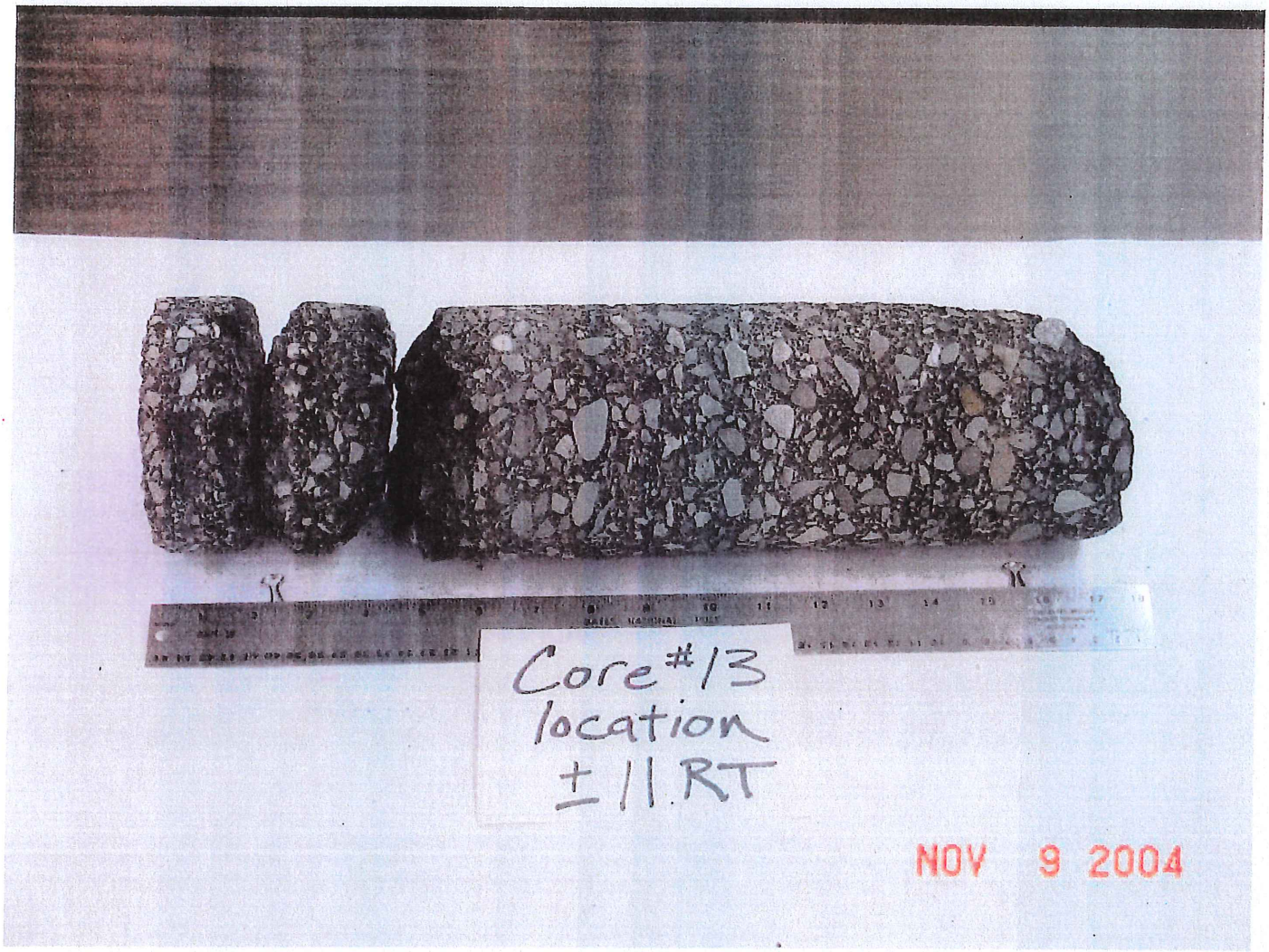








Core #13 location



Core # 13 location
taken at 11' RT