# ITEM NO. 211S - RECYCLING EXISTING AGGREGATE 8-1800

## 211S.1 - Description

This item governs: (1) breaking up existing asphalt pavement surfaces, (2) salvaging and placing existing broken up asphalt surface and flexible base materials on an existing subgrade and (3) compacting the courses in conformity with typical sections indicated in the Drawings, directions of the Engineer or designated representative and requirements herein specified.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text and accompanying tables, the inch-pound units are given preference followed by SI units shown within parentheses.

## 211S.2 - Submittals

The submittal requirements of this specification item may include:

A. Source, gradation and test results for the recycled existing material, and

B. Field density test results for in-place compacted recycled aggregate layers.

## 211S.3 - Materials

Materials required for use under this specification item shall conform to the following specification items as applicable:

| Description of Activity | Item No. |
|---|---|
| Street Excavation | 110S |
| Hydrated Lime and Lime Slurry | 202S |
| Lime Treatment for Materials in Place | 203S |
| Portland Cement Treatment for Materials in Place | 204S |
| Flexible Base (Crushed Stone) | 210S |
| Asphalts, Oils and Emulsions | 301S |
| Emulsified Asphalt Treatment | 310S |
| Two Course Surface Treatment | 320S |
| Hot Mix Asphaltic Concrete Pavement | 340S |

This item will be paid for at the contract unit bid price for "Recycling Existing Aggregate". The unit bid price shall include full compensation for all work herein specified, including: scarifying, loosening and breaking up the existing asphaltic surface and base materials; removing, saving, loading, hauling and stockpiling materials; placing of salvaged materials with or without additional base materials; all water required and all equipment, tools, labor and incidentals necessary to complete the work. Any new materials required shall be paid under their respective items listed above, but the pulverizing of new and old materials shall be incidental to complete the work.

Payment will be made under:

| | | |
|---|---|---|
| Pay Item No. 211-9A: | Recycling Existing Aggregate | Per Cubic Yard. |
| | | |

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|---|---|
| _____ | |
| _____ | |
| _____ | |
| _____ | _____ |
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| | |
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| | |

| | |
|---|---|
| | Embankment Soil |

# ILLUSTRATIONS

FIGURE

PLAN OF BORINGS 1

# GEOTECHNICAL INVESTIGATION

NORTH ACTIVITIES CENTER

OAD AND PECAN BROOK DRIVE

AUSTIN, TEXAS

SPRINGDALE R

## INTRODUCTION

## PROJECT DESCRIPTION

[redacted]

Four borings at the corners of the building were terminated at a depth of 60 feet. [illegible] building. T

ring in the middle of the building was terminated at a depth of 80 feet. Four [illegible] and one b

borings were established in the field by measuring distances from the existing streets. The

lan of Borings, Figure 1. borings were located at the approximate locations shown on the P

The results of the boring program are presented on the Logs of Borings, Figures 2 through

ies of cohesive soils were obtained continuously to laboratory evaluation. Undisturbed samp

waled, seamless tube samplers. These samples were extruded in the field, capped, sealed,

## LABORATORY TESTING

of the soil materials. Tested soils included Atterberg limits tests, moisture and dumente and dry

on the Logs of Borings, Figures 2 through 10. these tests are presented

The clays encountered in the borings at the site exhibited liquid limits ranging from 36 to 64

nd floor slabs are not a viable option for the planned building. It appears that soil-supported grou
ce due to the extreme depths of undercutting and replacement that would be necessary to redu
ls the subgrade PVR to acceptable magnitudes. Therefore, a structurally suspended slab
is recommended to provide a more sound network up ground floor slab and the underlyi
[illegible] structurally supported above the existing soils and [illegible]

**STRUCTURALLY SUSPENDED SLAB AND FOUNDATION SYSTEM** 3.2

the risk of crushing of the carton forms during concrete placement and finishing operations. As a quality control measure during construction, "actual" concrete quantities placed should be checked against anticipated quantities. Significant concrete losses would be an indication of a construction [illegible]

[illegible] portions of the grade beams along the perimeter of the building should be [illegible] lly backfilled with on-site clayey soils. The backfill soils should be placed at a [illegible] carefu [illegible]

[illegible]

## ILLED SHAFT SOIL INDUCED UPLIFT LOADS

ed belled piers will be subject to uplift loads as a result of swelling within the [illegible] ays. The underreamed shafts should have a base-to-shaft diameter ratio of at [illegible]

[illegible]

- Ultimate strength assessment of the base of the shafts to resist the applied uplift loads (uplift less dead load).

[illegible]

[illegible] drilling.

### 5.2.3 DR

Underream [illegible] overlying cl [illegible]

[redacted]

[redacted]

[redacted]

1557 (modified Proctor) or 98% maximum as determined by ASTM D 698 (standard

[illegible] attention upon constructing is particularly important to insure proper [illegible]

[illegible]ements [illegible] construction procedures are followed. Furthermore, after construction, joints and pav[illegible]

[illegible]trusion [illegible] should be inspected at regular intervals. Cracks should be sealed to prevent water i[illegible]

[illegible] pavement systems [illegible] maintenance [illegible]

[illegible] fine a seal coat or overlay after 8 to 12 years to [illegible] [illegible] content pavements will typically rec[illegible] extended the pavements service life.

## 6.5 DRAINAGE AND GRADING

Good drainage is important to reduce water percolation into the subgrade soils through [illegible] be sealed on a routine [illegible] pavement surface, all cracks and joints in the pavement should [illegible]

## 6.6 [illegible] DRAINAGE AND GRADING

All grading should provide positive drainage away from the proposed building and should [illegible] prevent water from collecting [illegible] or discharging near the foundation. Water must not be [illegible] within the foundation area. Surface drainage [illegible] pavement. Surface drainage gradients within 10 feet of the building should be constructed with maximum slopes allowed by local codes (5% if possible). [illegible]

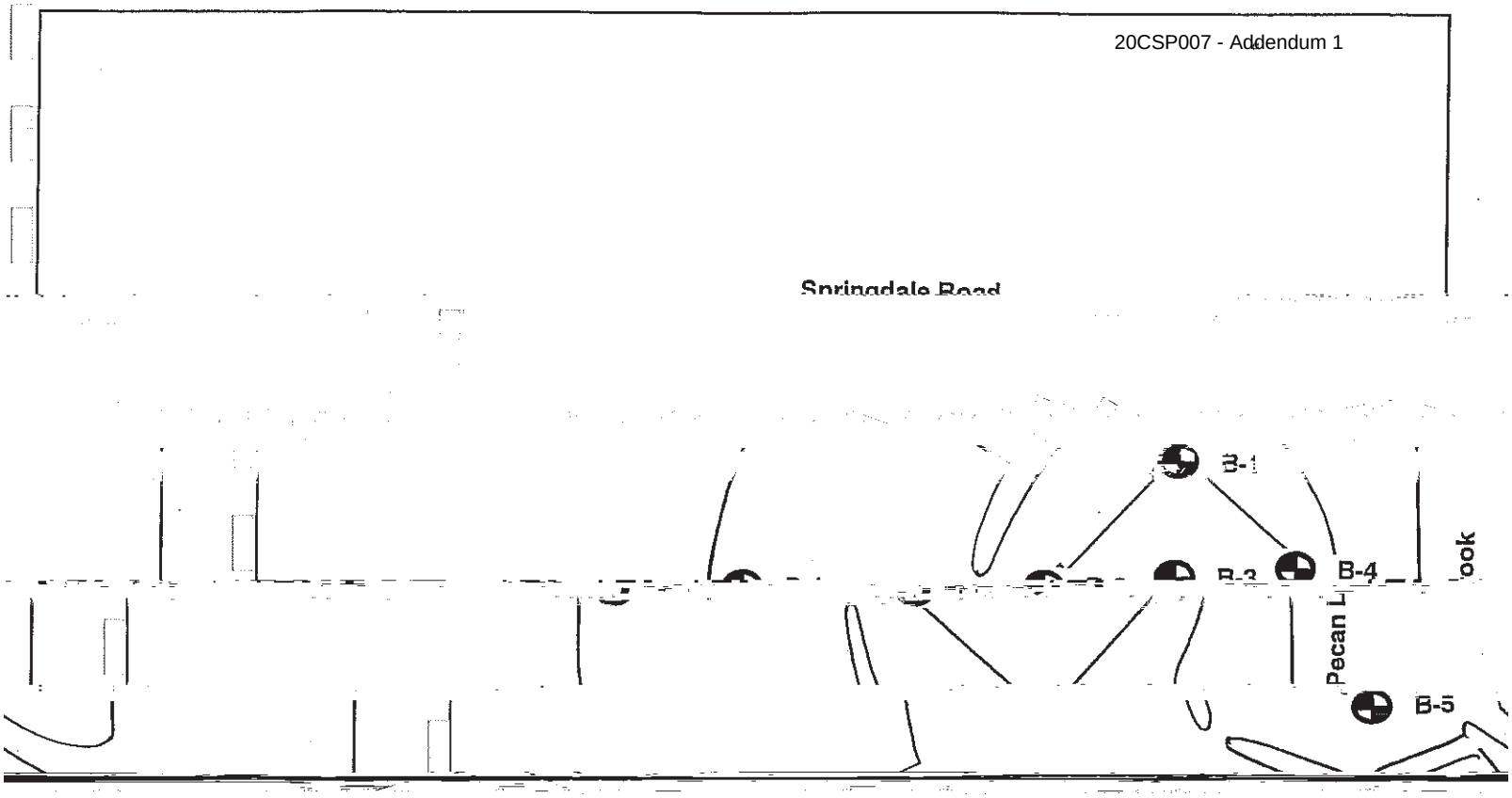
[illegible] prevent the discharge of [illegible] The roofs should be provided with gutters and downspouts to [illegible]

[illegible] to assist you on this project.

## 5.0 LIMITATIONS

[illegible] recommendations prepared were accomplished in accordance with currently acce[illegible] geotechnical engineering principles and practices. The possibility always exists that [illegible] decrease the possibility of unforeseen circumstances while considering the nature of [illegible] loading, size, and cost of the project. If there are any unusual conditions differing [illegible] recommended foundation system [illegible] effects on the performance of the re[illegible]

his report were prepared exclusively for the use of [illegible] t School District and their consultants. The information [illegible] The recommendations given in t[illegible] BLGY/Sverdrup, Austin Independen[illegible]


Springdale Road
B-1
B-4
Pecan L
ook
B-5

# LOG OF BORING B-1

Elev.: NA Location: See Figure 1 Date: 09-15-199

Tan clayey GRAVEL

Hard light brown CLAY w/ gravel

Hard tan CLAY w/ calcite deposits

(CH)

Very stiff to hard tan & gray sandy CLAY

Notes: Completion Depth: 60.0'

FIGURE 2

TERRA-MAR

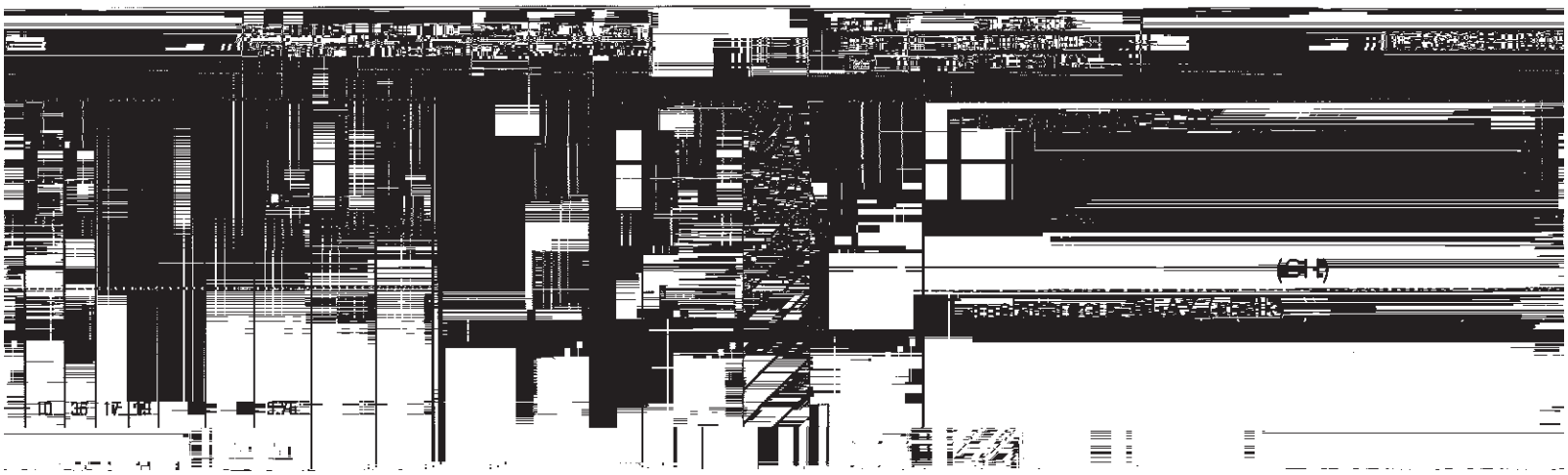
# LOG OF BORING B-1

Project: **North Activities Center** Project No.: **AE99-045**

| ELEVATION/ DEPTH | SOIL SYMBOLS SAMPLER SYMBOLS | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | [illegible] | | | | | | | | | |
| | | Hard tan & gray shaley CLAY w/ dark gray shale | | | | | | | 4.5+ | | |
| | | (CH) | | | | | | | 4.5+ | | |

FIGURE 3

# LOG OF BORING B-2



# LOG OF BORING B-3

Depth to water when checked: **NA** was: **NA**
Depth to caving when checked: **NA** was: **NA**

# LOG OF BORING B-4

Project: North Activities Center

Project No.: AE99-045

Depth to water when encountered: NA

Depth to caving when encountered: NA

Date: NA

Time: NA

| ATION | SOIL SYMBOLS | DESCRIPTION | PID | | |

# LOG OF BORING B-4

Project No.: **AE99-045**

Project: **North Activities Center**

| MC | LL | PI | | 200 | DD | P PEN | UNCON | Strain | ELEVATION/ | SOIL SYMBOLS |
|---|---|---|---|---|---|---|---|---|---|---|

# LOG OF BORING B-5

Project: North Activities Center

Project No.: 4E99.045

n checked: N/A
n checked: N/A

was: N/A
was: N/A

Depth to water whe
Depth to caving whe

DESCRIPTION

-w/ calcite deposits

Completion Depth: 60.0'

Notes:

FIGURE 9

# LOG OF BORING B-5

4.5+

-w/ calcite seams

45

(CH)

# LOG OF BORING P-1

Project: North Activities Center

Project No.: AF99-045

n: See Figure 1

Date: 9/16/1999 Elev.: N/A Locatio

Depth to water at completion of boring: Dry

was: NA

Depth to water when checked: NA

was: NA

Depth to caving when checked: NA

# LOG OF BORING P-3

North Activities Center

Depth to water at completion of boring: Dry

30

35

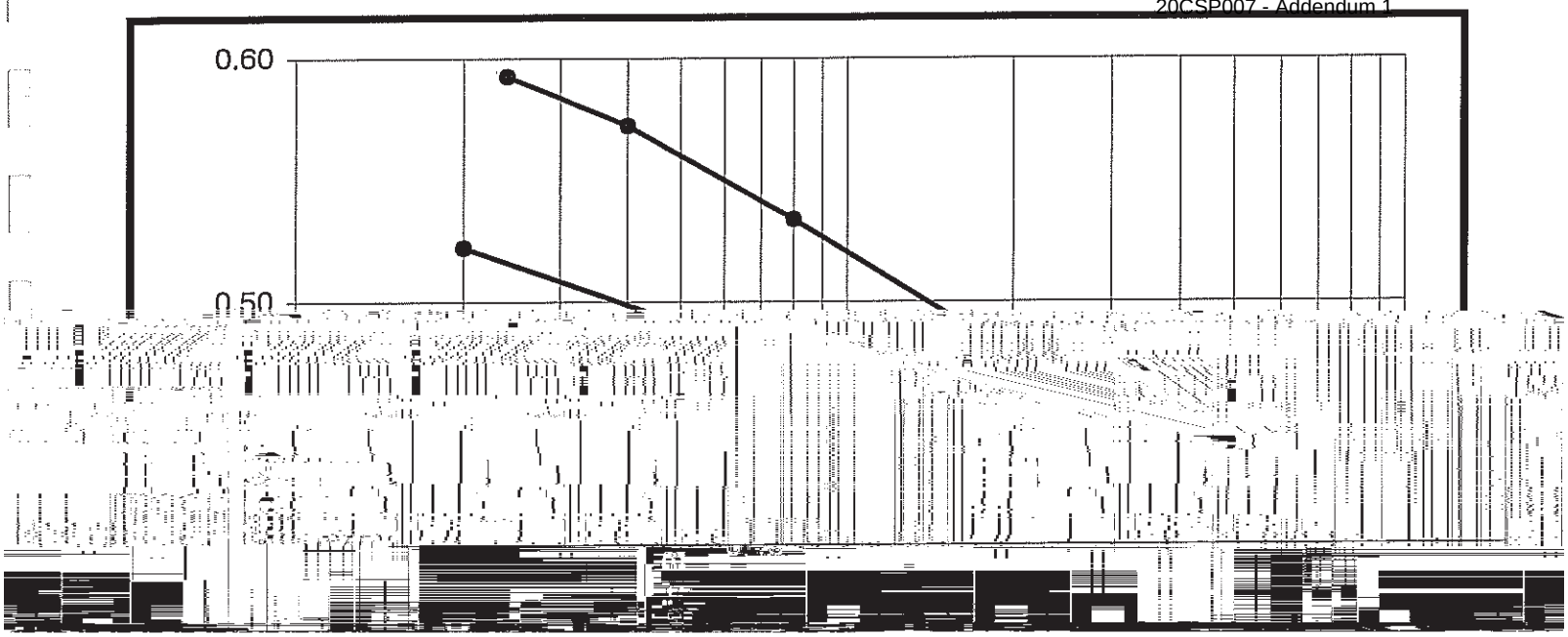
Notes: Completion Depth: 5.0'

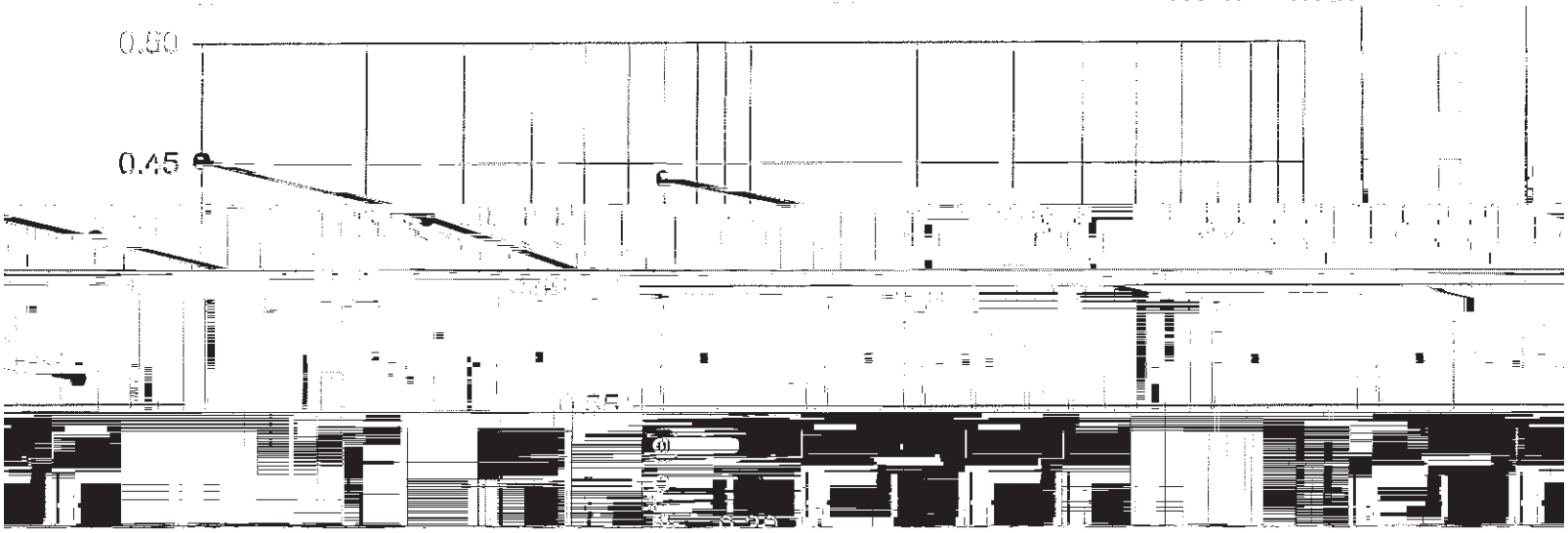
FIGURE 13

# LOG OF BORING P-4

Project: **North Activities Center** Project No.: **AE99-045**

Depth to water when checked: NA
Depth to caving when checked: NA


0.60
0.50


0.50
0.45
0.35