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LEBROO 4951  
# 21.00

ORIGINAL

PROJECT NO. STA 0091-024  
LOCATION SH9 Summit County  
PERMANENT EASEMENT NO. PE-104, PE-104A, & PE-105  
PROJECT CODE: 14927

PERMANENT EASEMENT AGREEMENT

THIS PERMANENT EASEMENT AGREEMENT ("Agreement") is made this 3rd  
day of August, 2007, by and between FARMER'S GROVE ASSOCIATION, a  
Colorado Non-profit Corporation, Grantor, of Summit County, State of Colorado,  
DEPARTMENT OF TRANSPORTATION, STATE OF COLORADO (CDOT), and COUNTY  
OF SUMMIT (County), Grantees,

WITNESSETH:

WHEREAS, CDOT has a highway improvement project, Project No. STA 0091-024,  
Project Code 14927 (Project) for State Highway 9 from Valley Brook Drive to Swan Mountain  
Road, Summit County, Colorado; and

WHEREAS, the Project includes construction of an extension of Dickey Drive to  
Farmers Lane and Jarelle Drive, and the construction and installation of earthen berms,  
landscaping materials and vegetation, an irrigation system, and a sound wall within CDOT's  
right-of-way, within Farmer's Lane right-of-way, and on Grantor's property, collectively  
hereinafter referred to as the "Premises"; and

WHEREAS, the parties desire to enter into this Agreement to provide for the  
construction, installation, and maintenance of the earthen berms, landscaping materials and  
vegetation, an irrigation system, a sound wall, and the extension of Dickey Drive upon the  
Premises.

NOW, THEREFORE, Grantor, for \$10.00 and other good and valuable consideration and  
the mutual covenants contained herein, in hand paid by Grantees, receipt of which is hereby  
acknowledged, the following agreements are made:



1) Grant of Easement:

a) Grantor does hereby give and grant unto CDOT, its heirs, successors, and assigns a PERPETUAL AND IRREVOCABLE NON-EXCLUSIVE EASEMENT for the purpose of maintaining the sound wall on, along, over and across the following described premises, to-wit:

See Attached Exhibits "A" dated August 31, 2006, for:

Project Number:	STA 0091-024
Permanent Easement No.	PE-105
Project Code:	14927

b) Grantor does hereby give and grant unto County, its heirs, successors, and assigns a PERPETUAL AND IRREVOCABLE NON-EXCLUSIVE EASEMENT for the purpose of maintaining the extension of Dickey Drive along Farmer's Lane to the North side of Jarell Drive, and Jarelle Drive from the West side of Farmer's Lane easterly to State Highway 9 on, along, over and across the following described premises, to wit:

See Attached Exhibits "A" dated August 31, 2006, for:

Project Number:	STA 0091-024
Permanent Easement Nos.	PE-104 and PE-104A
Project Code:	14927

2) Temporary Construction Easement. Grantor shall grant unto CDOT a temporary easement for the purpose of constructing and installing an earthen berm, landscaping materials and vegetation, and an irrigation system on, along, over and across the following described premises, to-wit:

See Attached Exhibits "A" dated September 20, 2006, for:

Project Number:	STA 0091-024
Temporary Easement Nos.	TE-104 Rev
Project Code:	14927

Said temporary easement shall begin upon CDOT's initial entry into the premises described as TE-104 Rev for the stated purpose and shall terminate eighteen (18) months from the date of inception, but, in any event, shall terminate no later than December 31, 2010.

3) Cost and Construction of Improvements. The cost of constructing and installing the earthen berms, landscaping materials and vegetation, an irrigation system, a sound wall, and the extension of Dickey Drive along Farmer's Lane to Jarelle Drive (collectively hereinafter referred to as "The Improvements") shall be borne by CDOT, its agents, contractors, subcontractors, representatives, employees, licensees or invitees. The Improvements to the Premises shall, at a minimum, meet the current site plan requirements of the Summit County Planning Department. Upon completion of The Improvements, Summit County shall provide CDOT with a written certificate of the satisfactory completion of such work. Grantor shall accept such written certification, and shall not request or assert any claim against CDOT for any additional work.

4) Maintenance of The Improvements.

a) Grantor shall be responsible for the maintenance of the earthen berms, landscaping materials and vegetation, and irrigation system as constructed upon the Premises. Said maintenance shall include, but not necessarily be limited to, watering, weeding, pruning, mowing, and replacing said vegetation. Grantor shall provide a maintenance bond to Summit County per the requirements of the Planning Department for maintaining the landscaping. Grantor shall exercise reasonable care to avoid damage and minimize disturbance to the sound wall. In the event damage occurs as a result of Grantor's activities or by person(s) unknown, it shall be immediately reported to the CDOT Maintenance Department.

b) CDOT shall be responsible for the necessary maintenance, repair, and replacement of the sound wall as constructed upon PE-105 and upon Farmer's Lane right-of-way. Grantees have no responsibility for the maintenance of the earthen berms,

landscaping materials and vegetation or the irrigation system upon the Premises, but shall take reasonable care to avoid

damage and minimize disturbance to these improvements when maintaining the sound wall. If damaged during the maintenance, repair or replacement activities for the sound wall, CDOT shall be responsible for the repair and replacement of the damaged berms, landscaping materials and vegetation, and irrigation system. Grantor shall have permission to remove graffiti from the sound wall wherever said wall is constructed.

c) County shall be responsible for the maintenance of the extension of Dickey Drive along Farmer's Lane to Jarelle Drive after the Project is completed. Grantor shall continue to maintain that portion of Farmer's Lane lying North of Jarelle Drive, Jarelle Drive West of Farmer's Lane, and all other internal subdivision roadways.

5) Binding Effect. All provisions and all obligations of this Agreement, including the benefits and burdens, shall run with the land and are binding upon and inure to the heirs, successors, and assigns of the parties hereto. This Agreement is subject to all prior encumbrances, restrictions, rights, claims and interests of record, or otherwise, and shall become effective upon its recordation at the Summit County Clerk and Recorder's Office.

6) Limitations. Grantees expressly reserve the right to assert all defenses and liability limitations provided by law, including, without limitation, the Colorado Governmental Immunity Act, Section 24-10-101, *et seq.* or any successor acts or provisions.

7) Reservations. Grantor reserves the right to use and occupy the Premises for any purpose not inconsistent with the rights and privileges granted herein and which would not unreasonably interfere with Grantees' use thereof.

8) Entire Agreement. This written Agreement constitutes the entire agreement of the parties. No provisions regarding the subject matter of this Agreement, other than those expressly set forth herein, will be of any force and effect. No modification, change or alteration of this Agreement will be of any force or effect unless in writing and signed by the parties.

9) Notice. All notices, demands, requests and other communications required or permitted under this Agreement will be in writing and will be deemed delivered when actually received or, if by telecopy, on the next business day after receipt, or, if earlier, and regardless whether actually received or not, three (3) days after deposit in the United States mails, first class, postage prepaid, registered or certified, addressed as follows:

CDOT:                    Region Transportation Director  
                         Colorado Department of Transportation, Region 1  
                         18500 East Colfax Avenue  
                         Aurora, CO 80011

County:                Summit County Commissioners  
                         P.O. Box 68  
                         208 E. Lincoln Avenue  
                         Breckenridge, CO 80424

Grantor:               Farmers Grove Association  
                         P.O. Box 23217  
                         Silverthorne, CO 80498-3217

Either party may change its address by giving notice to the other party as provided for above.

10) Legal Jurisdiction. This Agreement and the rights and duties of the parties hereunder shall be interpreted in accordance with the laws of the State of Colorado. Venue for any and all legal actions arising hereunder shall lie in the District Court in and for the County of Summit, State of Colorado.

11) Severance. If any provision of this Agreement is held to be illegal, invalid or unenforceable under present or future laws, such provisions shall be fully severable; this Agreement shall be construed and

enforced as if such illegal, invalid or unenforceable provision had never comprised a part of this Agreement; and the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance from this Agreement.

GRANTOR:

FARMERS GROVE ASSOCIATION  
A Colorado Non-profit Corporation

By [Signature]

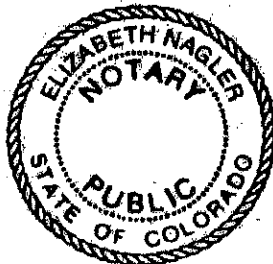
STATE OF COLORADO )  
COUNTY OF Summit ) ss.

The foregoing instrument was acknowledged before me this 3<sup>rd</sup> day of August, 2007, by WES HUMFORD

Witness my hand and official seal.

My Commission Expires \_\_\_\_\_

[Signature]  
Notary Public



My Commission Expires  
OCTOBER 18, 2010

GRANTEE:

DEPARTMENT OF TRANSPORTATION  
STATE OF COLORADO

ATTEST:

By: Douglas W. Bennett  
Douglas W. Bennett  
Chief Clerk for Right of Way

By: Pamela Hutton  
Pamela Hutton, P.E.  
Chief Engineer

STATE OF COLORADO                     )  
  ) ss.  
CITY AND COUNTY OF DENVER         )

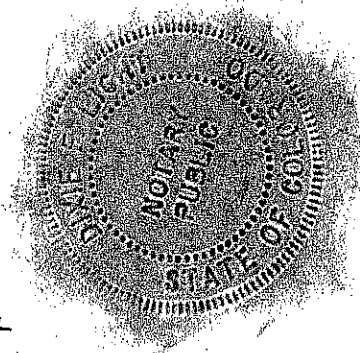
The foregoing instrument was acknowledged before me this 31 day of July, 2007, Pamela Hutton, P.E. as Chief Engineer, and Douglas W. Bennett as Chief Clerk for Right of Way of the Department of Transportation, State of Colorado.

Witness my hand and official seal.

My Commission Expires:

4/17/2010

Devin E. Light  
Notary Public







GRANTEE:

COUNTY OF SUMMIT  
STATE OF COLORADO

ATTEST:

By (Chei Ban)

By Thomas A Long  
Name: Thomas A Long  
Title: Chairman, Board of County Commissioners

Approved:  
to form

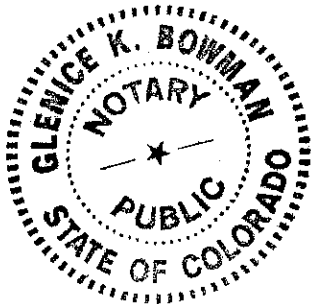
MRS  
Legal

STATE OF COLORADO )  
COUNTY OF Summit ) ss.

The foregoing instrument was acknowledged before me this 14th day of August, 2007, by Thomas A. Long, Chairman, Board of County Commissioners

Witness my hand and official seal.

My Commission Expires 8/20/09



Glenice K. Bowman  
Notary Public

**EXHIBIT "A"**

**PROJECT NUMBER: STA 0091-024**  
**PERMANENT EASEMENT NUMBER: PE-105**

**Project Code: 14927**

**Date: August 31, 2006**

**DESCRIPTION**

A permanent easement No. PE-105 of the Department of Transportation, State of Colorado, Project No. STA 0091-024, containing 8,753 sq. ft. (0.201 acres), more or less, being all of Tract G of Amended Farmer's Grove Subdivision as recorded at Reception Number 667464 of the Office of the Summit County Clerk and Recorder, situated in Section 1, Township 6 South, Range 78 West, of the Sixth Principal Meridian, Summit County, Colorado, said permanent easement being additionally described as follows:

Commencing at the East Quarter Corner of said Section 1, being monumented by a found 2 ½ inch diameter Bureau of Land Management aluminum cap stamped ¼ Corner between Section 6, Township 6 South Range 77 West and Section 1, Township 6 South Range 78 West; Thence N15°22'38"W a distance of 1,143.16 feet to a point on the southeast corner of said Tract G, said point being the TRUE POINT OF BEGINNING;

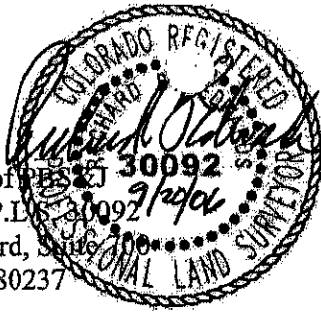
1. Thence along the south line of said Tract G, S 76°30'07" W, a distance of 66.53 feet to the southwest corner of of said Tract G;
2. Thence along the westerly line of of said Tract G, N 13°29'53" W, a distance of 7.85 feet;
3. Thence continuing along said westerly line and along a curve to the right, said curve having a central angle of 27°20'50", having a radius of 75.00 feet, an arc length of 35.80 feet, a chord bearing N 0°10'32" E, a distance of 35.46 feet;
4. Thence continuing along said westerly line, N 13°50'59" E, a distance of 59.73 feet;
5. Thence continuing along said westerly line and along a curve to the left, said curve having a central angle of 19°20'25", having a radius of 175.00 feet, an arc length of 59.07 feet, a chord bearing N 4°10'44" E, a distance of 58.79 feet;
6. Thence continuing along said westerly line, N05°29'32"W, a distance of 208.57 feet to the north corner of said Tract G;
7. Thence along the easterly line of said Tract G, S 10°54'24" E, a distance of 358.28 feet, more or less, to the TRUE POINT OF BEGINNING.

The above-described permanent easement contains 8,753 sq. ft. (0.201 acres), more or less.

The purpose of the above-described Permanent Easement is for sound wall construction and maintenance.

Bearings are based upon grid bearing of N09°08'12"W from SH 9 CM-MP 87.92 to SH 9 CM-MP 88.13, each a CDOT Type II control monument, as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN), as indicated on the Survey Control Diagram provided by the Colorado Department of Transportation, Project STA 009-024, Project Code 14927.

For and on Behalf of  
Richard Edwards, P.L.S.  
4601 DTC Boulevard,  
Denver, Colorado 80237  
Ph 303-221-7275



**EXHIBIT "A"**

**PROJECT NUMBER: STA 0091-024**  
**PERMANENT EASEMENT Number: PE-104**

**Project Code: 14927**

**Date: August 31, 2006**

**DESCRIPTION**

A permanent easement No. PE-104 of the Department of Transportation, State of Colorado, Project No. STA 0091-024, containing 1,328 square feet (0.031 acres), more or less, being a portion of Tract H of Amended Farmer's Grove Subdivision as recorded at Reception Number 667464 of the Office of the Summit County Clerk and Recorder, situated in Section 1, Township 6 South, Range 78 West, of the Sixth Principal Meridian, Summit County, Colorado, said permanent easement being more particularly described as follows:

Commencing at the East Quarter Corner of said Section 1, being monumented by a found 2 ½ inch diameter Bureau of Land Management aluminum cap stamped ¼ Corner between Section 6, Township 6 South Range 77 West and Section 1, Township 6 South Range 78 West; Thence N17°27'27"W a distance of 983.97 feet to a point on the west line of said Tract H, said point being the TRUE POINT OF BEGINNING;

1. Thence S34°45'02"E a distance of 77.05 feet to a point on the westerly Right of Way line of State Highway 9 per Right of Way Project TQFC 009-1(4) (April 2006);
2. Thence along said westerly Right of Way line, S12°52'36"E a distance of 11.75 feet to the southeast corner of said Tract H;
3. Thence along the south line of said Tract H, S76°49'37"W a distance of 27.80 feet to the southwest corner of said Tract H;
4. Thence along the west line of said Tract H, N13°29'53"W a distance of 83.41 feet to the TRUE POINT OF BEGINNING.

The above-described permanent easement contains 1,328 square feet (0.031 acres), more or less.

The above-described permanent easement is for service road improvements.

Bearings are based upon grid bearing of N09°08'12"W from SH 9 CM-MP 87.92 to SH 9 CM-MP 88.13, each a CDOT Type II control monument, as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN), as indicated on the Survey Control Diagram provided by the Colorado Department of Transportation, Project STA 009-024, Project Code 14927.



For and on Behalf of  
Richard Edwards, P.L.S.  
4601 DTC Boulevard, Suite 700  
Denver, Colorado 80237  
Ph 303-221-7275

**EXHIBIT "A"**

**PROJECT NUMBER: STA 0091-024**  
**PERMANENT EASEMENT NUMBER: PE-104A**

**Project Code: 14927**  
**Date: August 31, 2006**

**DESCRIPTION**

A permanent easement No. PE-104A of the Department of Transportation, State of Colorado, Project No. STA 0091-024, containing 107 square feet (0.003 acres), more or less, being a portion of Tract H of Amended Farmer's Grove Subdivision as recorded at Reception Number 667464 of the Office of the Summit County Clerk and Recorder, situated in Section 1, Township 6 South, Range 78 West, of the Sixth Principal Meridian, Summit County, Colorado, said permanent easement being more particularly described as follows:

Commencing at the East Quarter Corner of said Section 1, being monumented by a found 2 ½ inch diameter Bureau of Land Management aluminum cap stamped ¼ Corner between Section 6, Township 6 South Range 77 West and Section 1, Township 6 South Range 78 West; Thence N16°36'58"W a distance of 1,084.15 feet to a point on the north line of said Tract H, said point being the TRUE POINT OF BEGINNING;

1. Thence along said north line, N76°30'07"E a distance of 20.83 feet to a point on the westerly Right of Way line of State Highway 9 per Right of Way Project TQFC 009-1(4) (April 2006);
2. Thence along said westerly Right of Way line, S12°52'36"E a distance of 10.32 feet;
3. Thence leaving said westerly Right of Way line, N77°01'12"W a distance of 23.15 feet to the TRUE POINT OF BEGINNING.

The above-described permanent easement contains 107 square feet (0.003 acres), more or less.

The above described permanent easement is for service road improvements.

Bearings are based upon grid bearing of N09°08'12"W from SH 9 CM-MP 87.92 to SH 9 CM-MP 88.13, each a CDOT Type II control monument, as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN), as indicated on the Survey Control Diagram provided by the Colorado Department of Transportation, Project STA 009-024, Project Code 14927.



For and on behalf of R.E.S. & J  
Richard Edwards, P.E.S. 30092  
4601 DTC Boulevard, Suite 700  
Denver, Colorado 80237  
Ph 303-221-7275

**EXHIBIT "A"**

**PROJECT NUMBER: STA 0091-024**  
**TEMPORARY EASEMENT NUMBER: TE-104Rev**

**Project Code: 14927**

**Date: September 20, 2006**

**DESCRIPTION**

A temporary easement No. TE-104Rev of the Department of Transportation, State of Colorado, Project No. STA 0091-024, containing 5,857 square feet (0.134 acres), more or less, being a portion of Tract H of Amended Farmer's Grove Subdivision as recorded at Reception Number 667464 of the Office of the Summit County Clerk and Recorder, situated in Section 1, Township 6 South, Range 78 West, of the Sixth Principal Meridian, Summit County, Colorado, said temporary easement being more particularly described as follows:

Commencing at the East Quarter Corner of said Section 1, being monumented by a found 2 ½ inch diameter Bureau of Land Management aluminum cap stamped ¼ Corner between Section 6, Township 6 South Range 77 West and Section 1, Township 6 South Range 78 West; Thence N16°36'58"W a distance of 1,084.15 feet to a point on the north line of said Tract H, said point being the TRUE POINT OF BEGINNING;

1. Thence S77°01'12"E a distance of 23.15 feet to a point on the westerly Right of Way line of State Highway 9 per Right of Way Project TQFC 009-1(4) (April, 2006);
2. Thence along said westerly Right of Way line, S12°52'36"E a distance of 162.43 feet;
3. Thence N34°45'02"W a distance of 185.34 feet to the northwest corner of said Tract H;
4. Thence along the north line of said Tract H, N76°30'07"E a distance of 48.22 feet to the TRUE POINT OF BEGINNING.

The above-described temporary easement contains 5,857 square feet (0.134 acres), more or less.

The purpose of the above-described Temporary Easement is for roadway construction.

Bearings are based upon grid bearing of N09°08'12"W from SH 9 CM-MP 87.92 to SH 9 CM-MP 88.13, each a CDOT Type II control monument, as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN), as indicated on the Survey Control Diagram provided by the Colorado Department of Transportation, Project STA 009-024, Project Code 14927.

For and on Behalf of PLS & S  
Richard Edwards, P.L.S.  
4601 DTC Boulevard, Suite 700  
Denver, Colorado 80237  
Ph 303-221-7275



CDOT STA #9 - Breckenridge

# LANDSCAPE LEGEND























SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE	QTY
EVERGREEN TREES:				
BP	BRISTLEcone PINE	PINUS ARISTATA	8 FT.	4
CBS	COLORADO BLUE SPRUCE	PICEA PUNGENS GLAUCA	8 FT.	13
ES	ENGELMANN SPRUCE	PICEA ENGELMANNII	8 FT.	9
DECIDUOUS TREES:				
JA (LG)	QUAKING ASPEN-LARGE	POPULUS TREMULOIDES	2" CAL.	17
JA (SM)	QUAKING ASPEN-SMALL	POPULUS TREMULOIDES	1-1/2" CAL.	21
SS	SASKATOON SERVICEBERRY	AMELANCHIER ALNIFOLIA	1-1/2" CAL.	7
LARGE DECIDUOUS SHRUBS:				
CL	COMMON LILAC	SYRINGA VULGARIS	5 GAL.	7
SP	SIBERIAN PEASHRUB	CARAGANA ARBORESCENS	5 GAL.	4
MEDIUM DECIDUOUS SHRUBS:				
AC	ALPINE CURRANT	RIBES ALPINUM	5 GAL.	34
BC	BUSH CINQUEFOIL	POTENTILLA FRUTICOSA	5 GAL.	31
IN	MOUNTAIN NINEBARK	PHYSOCARPUS MONOGYNUS	5 GAL.	16
RR	REDLEAF ROSE	ROSA GLAUCA	5 GAL.	33

# LANDSCAPE SCHE

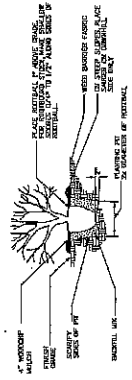
ITEM NO.	DESC
207-00205	TOPSOIL
207-00210	STOCKPI
212-00032	SOIL CO
213-00008	LANDSCA
212-00005	NATIVE
213-00002	MULCHIN
214-00350	DECIDUO
214-00220	DECIDUO
214-00215	DECIDUO
214-00508	EVERGRE

[illegible]

**LANDSCAPE LEGEND**

	STREET		COMMON NAME
	ENHANCED TREES		BRISTLETHORN PINE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE
	ENHANCED TREES		LAUREL LEAF SPRUCE

**EXISTING LANDSCAPE (TYP.)**



FARMER'S GROVE NOISE BERM/WALL  
SEE 9 LANDSCAPE PLAN  
NOVEMBER 13, 2006

3

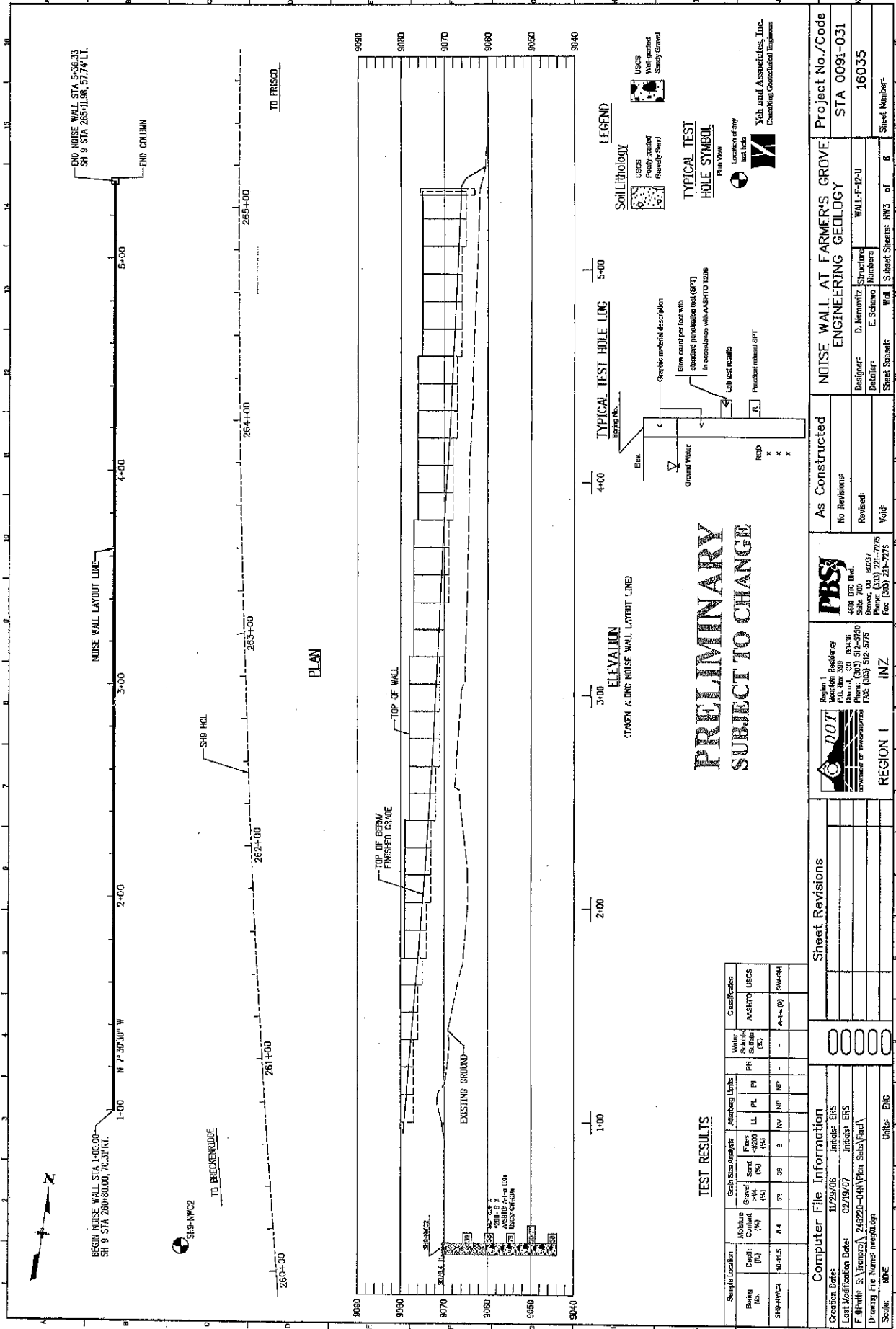
AND KEEPING THE ARMY FIRE, HE BROKE

③ TREE PLANTING ON SLOPE DETAIL (TYP.)  
MIN  
AND CONTOUR TREES OVER 6" HEIGHT

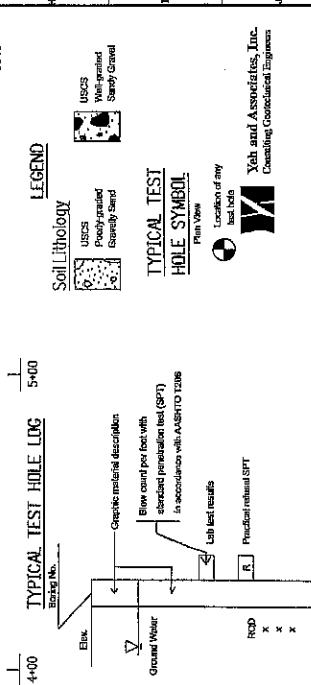
2 SHRUB PLANTING DETAIL  
NTS







PLAN



ELEVATION

TAKEN ALONG NOISE WALL LAYOUT LINE

**PRELIMINARY  
SUBJECT TO CHANGE**

TEST RESULTS

Sample Location	Grain Size Analysis			Atterberg Limits			Water Content (%)	Classification
	Gravel (%)	Sand (%)	Fines (No. 200) (%)	LL (%)	PL (%)	PH (%)		
S19-NWC2	02	38	60	14	10	10	-	A-1-a (9) GW-GM

Sheet Revisions

Revision	By	Date
1	ERS	11/29/06
2	ERS	02/19/07
3	ERS	02/19/07
4	ERS	02/19/07
5	ERS	02/19/07

Computer File Information

Creation Date:	11/29/06	Initials:	ERS
Last Modification Date:	02/19/07	Initials:	ERS
Full Path:	S:\Projects\248226-DAN\Pen. Sub\Yind\		
Drawing File Name:	nwc2.dgn		
Scale:	NONE	Units:	ENG



Region 1  
Location: Breckinridge  
P.O. Box 309  
Breckinridge, MO 64508  
Phone: (417) 512-5700  
Fax: (417) 512-5775



REGION 1 INZ

As Constructed

No Revisions	Revised	Valid
--------------	---------	-------

NOISE WALL AT FARMER'S GROVE  
ENGINEERING GEOLOGY

Designer:	D. Minawitz	Structure:	WALL-SP-U
Checker:	E. Schenck	Number:	
Sheet Subst:	Wall	Sheet Sheets:	NWC2 of 8

Project No./Code

STA 0091-031	16035
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Sheet Revisions

1	ERS	11/29/06
2	ERS	02/19/07
3	ERS	02/19/07
4	ERS	02/19/07
5	ERS	02/19/07

Computer File Information

Creation Date:	11/29/06	Initials:	ERS
Last Modification Date:	02/19/07	Initials:	ERS
Full Path:	S:\Projects\248226-DAN\Pen. Sub\Yind\		
Drawing File Name:	nwc2.dgn		
Scale:	NONE	Units:	ENG



Region 1  
Location: Breckinridge  
P.O. Box 309  
Breckinridge, MO 64508  
Phone: (417) 512-5700  
Fax: (417) 512-5775



REGION 1 INZ

As Constructed

No Revisions	Revised	Valid
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NOISE WALL AT FARMER'S GROVE  
ENGINEERING GEOLOGY

Designer:	D. Minawitz	Structure:	WALL-SP-U
Checker:	E. Schenck	Number:	
Sheet Subst:	Wall	Sheet Sheets:	NWC2 of 8

Project No./Code

STA 0091-031	16035
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Sheet Revisions

1	ERS	11/29/06
2	ERS	02/19/07
3	ERS	02/19/07
4	ERS	02/19/07
5	ERS	02/19/07

Computer File Information

Creation Date:	11/29/06	Initials:	ERS
Last Modification Date:	02/19/07	Initials:	ERS
Full Path:	S:\Projects\248226-DAN\Pen. Sub\Yind\		
Drawing File Name:	nwc2.dgn		
Scale:	NONE	Units:	ENG



Region 1  
Location: Breckinridge  
P.O. Box 309  
Breckinridge, MO 64508  
Phone: (417) 512-5700  
Fax: (417) 512-5775



REGION 1 INZ

As Constructed

No Revisions	Revised	Valid
--------------	---------	-------

NOISE WALL AT FARMER'S GROVE  
ENGINEERING GEOLOGY

Designer:	D. Minawitz	Structure:	WALL-SP-U
Checker:	E. Schenck	Number:	
Sheet Subst:	Wall	Sheet Sheets:	NWC2 of 8

Project No./Code

STA 0091-031	16035
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Sheet Revisions

1	ERS	11/29/06
2	ERS	02/19/07
3	ERS	02/19/07
4	ERS	02/19/07
5	ERS	02/19/07

Computer File Information

Creation Date:	11/29/06	Initials:	ERS
Last Modification Date:	02/19/07	Initials:	ERS
Full Path:	S:\Projects\248226-DAN\Pen. Sub\Yind\		
Drawing File Name:	nwc2.dgn		
Scale:	NONE	Units:	ENG



Region 1  
Location: Breckinridge  
P.O. Box 309  
Breckinridge, MO 64508  
Phone: (417) 512-5700  
Fax: (417) 512-5775



REGION 1 INZ

As Constructed

No Revisions	Revised	Valid
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NOISE WALL AT FARMER'S GROVE  
ENGINEERING GEOLOGY

Designer:	D. Minawitz	Structure:	WALL-SP-U
Checker:	E. Schenck	Number:	
Sheet Subst:	Wall	Sheet Sheets:	NWC2 of 8

Project No./Code

STA 0091-031	16035
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Sheet Revisions

1	ERS	11/29/06
2	ERS	02/19/07
3	ERS	02/19/07
4	ERS	02/19/07
5	ERS	02/19/07

Computer File Information

Creation Date:	11/29/06	Initials:	ERS
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Designer:	D. Minawitz	Structure:	WALL-SP-U
Checker:	E. Schenck	Number:	
Sheet Subst:	Wall	Sheet Sheets:	NWC2 of 8

Project No./Code

STA 0091-031	160
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# GENERAL NOTES

ALL EXCAVATION SHALL BE IN ACCORDANCE WITH SECTION 203 EXCAVATION AND EMBANKMENT. SEE ROADWAY PLANS FOR DETAILS. MINOR STRUCTURE EXCAVATION AND EMBANKMENT SHALL BE PERFORMED DURING THE CONSTRUCTION OF THE NOISE WALL. ALL SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN ITEM 607, FENCE CONCRETE SOUND BARRIER.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. A COLOURED STRUCTURAL CONCRETE STAIN FINISH WILL BE REQUIRED, AS SHOWN ON THE PLANS.

ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SECTION 506 OF THE STANDARD SPECIFICATIONS AS SHOWN ON THE PLANS.

THE FOLLOWING STRUCTURAL STEEL SHALL BE AASHTO M270 ASTM A-709, GRADE 50- H-PILES, PANEL SUPPORT ANGLES.

GRADE 60 REINFORCING STEEL IS REQUIRED.

ALL REINFORCING STEEL SHALL BE EPOXY COATED UNLESS OTHERWISE NOTED.

① DENOTES NON-COATED REINFORCING STEEL.

THE POTENTIAL SULFATE EXPOSURE TO CONCRETE IS CLASS ZERO.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06, THESE SPICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

BAR SIZE 4# 5# 6# 7# 8# 9# 10# 11#

SPICE LENGTH FOR CLASS 0 CONCRETE 1'-3" 1'-3" 1'-3" 1'-3" 2'-3" 3'-8" 4'-8" 5'-10" 7'-3"

WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS, THE MINIMUM LAP SPICE SHALL BE AS DESCRIBED ABOVE.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPICE LENGTH FOR BLACK REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06, THESE SPICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

BAR SIZE 4# 5# 6# 7# 8# 9# 10# 11#

SPICE LENGTH FOR CLASS 0 CONCRETE 1'-4" 1'-4" 1'-7" 1'-9" 2'-5" 3'-1" 3'-11" 4'-10"

THE ABOVE SPICE LENGTHS SHALL BE INCREASED BY 20 PERCENT FOR 3 BAR BUNDLES AND 33 PERCENT FOR 4 BAR BUNDLES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

FOR STRUCTURE NUMBER INSTALLATION, SEE STANDARD S-614-12.

STATIONS, ELEVATIONS AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A COMMON POINT OF BEGINNING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE DIMENSIONS IN THE FIELD BEFORE UNDERGOING OR FABRICATING ANY MATERIAL.

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERE TO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-5887 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.

# SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
601	STRUCTURAL CONCRETE STAIN	SY	671
607	FENCE CONCRETE SOUND BARRIER	SF	3206

① FENCE CONCRETE (SOUND BARRIER) INCLUDES ALL WORK AND MATERIALS FOR THE FOLLOWING ITEMS: STRUCTURE EXCAVATION, STRUCTURE BACKFILL (FLY FILL), H-PILES, CAISSONS, PANEL SUPPORT ANGLES, LEVELLING PADS, NEUTRALISE STUBS, CONCRETE CLASS B (WALL), REINFORCING STEEL (EPOXY COATED), PRECAST CONCRETE PANELS, AND ALL OTHER MISCELLANEOUS ITEMS NOT LISTED. BERM EMBANKMENT IS NOT INCLUDED IN THIS PAY ITEM.

# DESIGN DATA

AASHTO GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS (1988 W/ 1992 INTERIM REVISIONS)

AASHTO STANDARD SPECIFICATIONS FOR DESIGN OF HIGHWAY BRIDGES, 17TH ED., 2002, CUSTOMARY UNITS

# DESIGN METHOD:

LOAD FACTOR DESIGN  
PRECAST CONCRETE PANELS  
ALLOWABLE STRESS DESIGN  
FOUNDATION STABILITY  
H-PILES  
STEEL SUPPORT ANGLES

# REINFORCED CONCRETE:

CLASS B CONCRETE:  $f_c = 3,000$  psi (END COLUMN)  
CLASS 0 CONCRETE:  $f_c = 4,500$  psi (PRECAST PANELS)  
REINFORCING STEEL:  $f_y = 60,000$  psi

# STRUCTURAL STEEL:

AASHTO M270 ASTM A709, GRADE 50,  $F_y = 50,000$  PSI

# ABBREVIATIONS

B.F. - BACK FACE  
C.F. - CLEAR  
COMST. - CONSTRUCTION  
CONSTR. - CONSTRUCTION  
D.W.G. - DRAWING  
E.F. - EACH FACE  
E.L. - ELEVATION  
E.Q. - EQUALITY  
H.P. - HORIZONTAL  
H.F. - FRONT FACE  
J.T. - JOINT  
M.A.K. - MAXIMUM  
M.I.N. - MINIMUM  
N.E. - NORTH  
N.F. - NEAR FACE

① - DENOTES KEY NOTE REFERENCE

CROSS REFERENCE DRAWING NUMBER OF BLANK, REFERENCE IS TO SAME SHEET

SECTION OR DETAIL IDENTIFICATION

# INDEX OF DRAWINGS

- NW1 GENERAL INFORMATION
- NW2 EXCAVATION & ELEVATION
- NW3 FOUNDATION & ELEVATION
- NW4 FOUNDATION & ELEVATION
- NW5 TYPICAL SECTION & ELEVATION
- NW6 PANEL DETAILS
- NW7 PANEL DETAILS
- NW8 END COLUMN

PRELIMINARY  
SUBJECT TO CHANGE

NOISE WALL DESCRIPTION  
LOCATION: 1/2 MI. WEST OF STA 26+00.00 TO 26+11.88  
APPROX. STA 26+00.00 TO 26+11.88  
STRUCTURE NUMBER: WALL F-12-U

Computer File Information		Sheet Revisions		As Constructed		NOISE WALL AT FARMER'S GROVE GENERAL INFORMATION		Project No./Code STA 0091-031	
Creation Date:	11/08/06	Initials:	LUL	No Revisions:		Designer:	D. Minavitz	Structure:	WALL F-12-U
Last Modification Date:	02/15/07	Initials:	ERS	Revised:		Checker:	L. Lantry	Subcontractor:	
Drawn By:	S. Thompson	246220-004/Gen	Saleh (Final)	Void:		Sheet Subcontractor:	NOISE WALL	Sheet Number:	16035
Drawing File Name:	noiseWall.dgn								
Scale:	NONE								