REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	1	16

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

PLANS FOR PROPOSED

NEBRASKA OM-AD 36(34)

MINUTEMAN MISSILE ACCESS ROADS

BANNER, CHEYENNE, KIMBALL COUNTIES, NEBRASKA

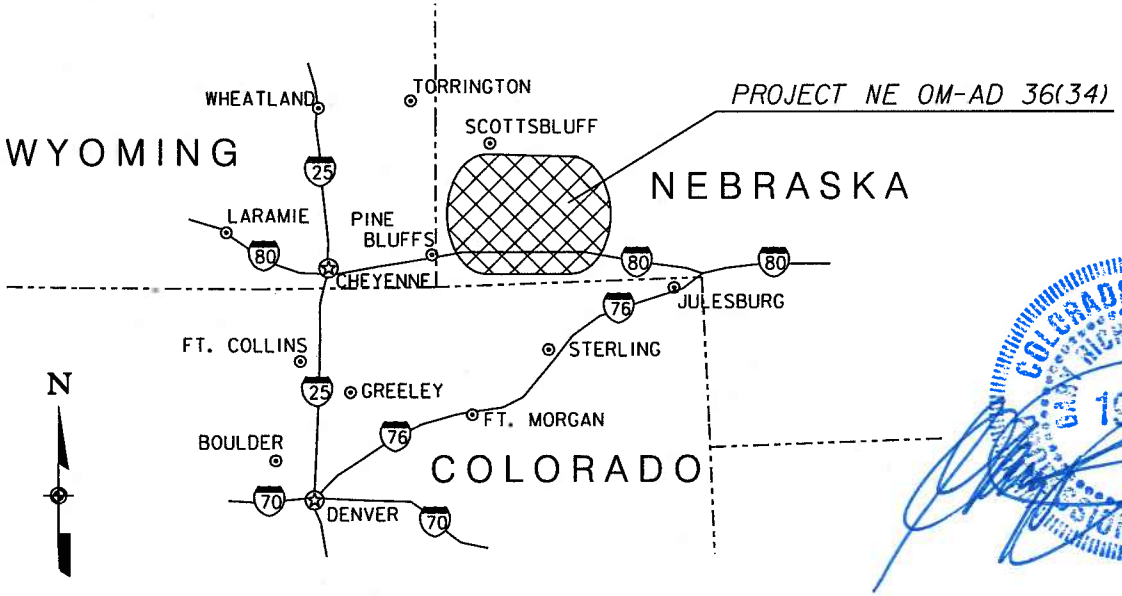
SCHEDULE A	LENGTH 36.9 MILES
SCHEDULE B	LENGTH 39.5 MILES
SCHEDULE C	LENGTH 59.7 MILES

INDEX TO SHEETS

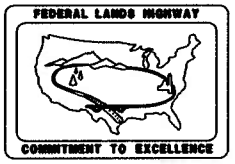
SHEET	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS
3-4	PROJECT LENGTH - TREATMENT TYPES
5-7	SUMMARY OF QUANTITIES
8	NEBRASKA LOCATION MAP
9-10	ROADWAY DESCRIPTIONS
11	BANNER COUNTY ROADS
12	KIMBALL COUNTY ROADS
13	CHEYENNE COUNTY ROADS
14	SEDIMENT CONTROL LOGS
15	WORK ZONE TRAFFIC CONTROL ADVANCE SIGNAGE
16	CONSTRUCTION TRAFFIC CONTROL SINGLE LANE LAYOUT

TYPE OF CONSTRUCTION:
Aggregate surface course

SPECIFICATIONS:
"STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, FP-03"
"U.S. CUSTOMARY UNITS"



0 50 100
SCALE IN MILES



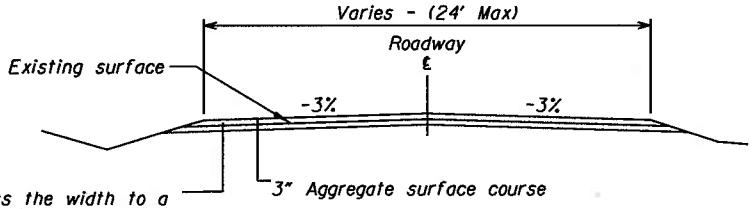
PLANS PREPARED FOR
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION
DENVER, COLORADO

PLANS PREPARED BY
BURLSTONE, INC.
65 S. UNION BLVD, SUITE 1030
LAKEWOOD, CO 80228
(720) 377-1040

Approved _____ DATE 04/12/05
for Division Engineer,
Central Federal Lands Highway Division

PROJECT MANAGER	LEAD DESIGNER
B. MCCAULEY	BURLSTONE, INC

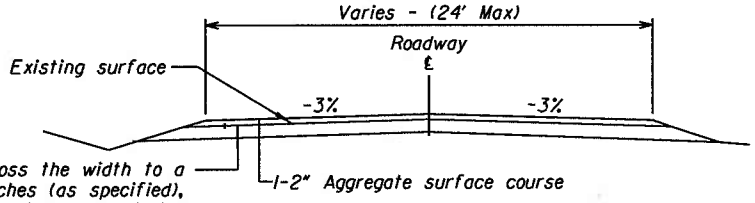
REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	2	16



Spread 301 aggregate surface course evenly across the width to a depth that when compacted will be 3 inches, scarify through new material and two inches into the existing surface, then shape and compact. Scarification paid under item 30305-1000 - Pulverizing, 2-inch depth.

TYPE 1 TREATMENT

(Banner County Roads - 14, 16, 61; Kimball County Roads - 7, 12; Cheyenne County Roads - 30, 34, 36, 38, 42, 52, 83, 99 (G-2), 131)



Spread 301 aggregate surface course evenly across the width to a depth that when compacted will be 1 to 2 inches (as specified), scarify through new material and six inches into the existing surface, then shape and compact. Scarification paid under item 30305-5000 - Pulverizing, 6-inch depth.

TYPE 2 TREATMENT

(Banner County Roads - 26, 28, 33; Kimball County Roads - 9, 14, 49; Cheyenne County Road - 99 (G-8))

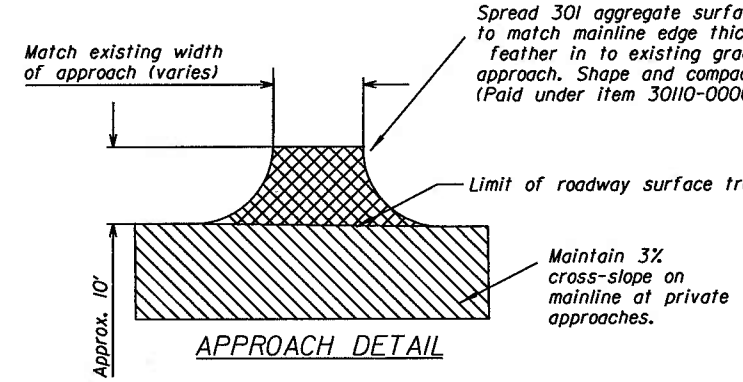
Notes:

1. Prior to placement of aggregate surface course and scarification, the Contractor shall perform localized repairs as directed by the CO pursuant to Section 303.06. Localized repairs to be paid for under item 30303-2000 - Aggregate Surface Reconditioning.

2. Where localized repairs require subexcavation, refer to Section 204. Payment for subexcavation will be made under section 622 items. Replacement material in subexcavated areas shall be aggregate surface course paid under item 30110-0000.

3. End resurfacing 150 feet beyone the missile site's approach when road continues.

4. Eliminate 3% cross-slope within intersection at uncontrolled public roadway intersections. Begin transition 100 feet from intersection on each roadway.



APPROACH DETAIL

COLORADO REGISTERED GARY RICHARD JOHNSON PROFESSIONAL ENGINEER 4/11/05

TYPICAL SECTIONS

PROJECT LENGTH - TREATMENT TYPES

REG.	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	3	16

Schedule A

ROADWAY		Flight #	LOCATION	SURFACE WIDTH ft	TREATMENT	ITEM 30110-0000 AGGR. SURFACE ton	ITEM 30110-0000 AGGR. SURFACE thickness (")	LENGTH miles
Banner	14	C-5	Hwy 71 east 8.9 miles	24.0	Type 1	19,582	3	8.9
Banner	16	C-7	Banner 14 north 0.1 miles	22.0	Type 1	202	3	0.1
Banner	28, 33 & 26	C-10	Silo C-10 east 4.7 miles (south on BCR 33)	22.0	Type 2	3,160	1	4.7
Kimball	12	K-3,4	Kimball 59 east 4.9 miles	24.0	Type 1	10,781	3	4.9
Kimball	14	E-5	Kimball 17 east 4.0 miles	24.0	Type 2	5,867	2	4.0
Kimball	49	F-9	Silo F-9 north 6.9 miles	24.0	Type 2	10,121	2	6.9
Cheyenne	83	F-5	HWY 30 north 3.4 miles to F-5	24.0	Type 1	7,481	3	3.4
Cheyenne	99	G-2	Cheyenne 40 south 4.0 miles	24.0	Type 1	8,801	3	4.0
			TOTAL			65,993 ton		36.9 mi

Assumed unit wieght of Aggregate Surface Course = 138.9 lb/ft3

Schedule B

ROADWAY		Flight #	LOCATION	SURFACE WIDTH ft	TREATMENT	ITEM 30110-0000 AGGR. SURFACE ton	ITEM 30110-0000 AGGR. SURFACE thickness (")	LENGTH miles
Banner	14	C-5	Hwy 71 east 8.9 miles	24.0	Type 1	19,582	3	8.9
Banner	16	C-7	Banner 14 north 0.1 miles	22.0	Type 1	202	3	0.1
Banner	28, 33 & 26	C-10	Silo C-10 east 4.7 miles (south on BCR 33)	22.0	Type 2	3,160	1	4.7
Kimball	12	K-3,4	Kimball 59 east 4.9 miles	24.0	Type 1	10,781	3	4.9
Kimball	14	E-5	Kimball 17 east 4.0 miles	24.0	Type 2	5,867	2	4.0
Kimball	49	F-9	Silo F-9 north 6.9 miles	24.0	Type 2	10,121	2	6.9
Cheyenne	83	F-5	HWY 30 north 3.4 miles to F-5	24.0	Type 1	7,481	3	3.4
Cheyenne	99	G-2	Cheyenne 40 south 4.0 miles	24.0	Type 1	8,801	3	4.0
Cheyenne	99	G-8	Silo G-8 north 2.6 miles	24.0	Type 2	3,814	2	2.6
			TOTAL			69,807 ton		39.5 mi

Assumed unit wieght of Aggregate Surface Course = 138.9 lb/ft3

COLORADO REGISTERED RICHARD JOHNSON 19273 PROFESSIONAL ENGINEER 4/11/05

PROJECT LENGTH - TREATMENT TYPES

REG.	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	4	16

Schedule C

ROADWAY		Flight #	LOCATION	SURFACE WIDTH ft	TREATMENT	ITEM 30110-0000 AGGR. SURFACE ton	thickness (")	LENGTH miles
Banner	14	C-5	Hwy 71 east 8.9 miles	24.0	Type 1	19,582	3	8.9
Banner	16	C-7	Banner 14 north 0.1 miles	22.0	Type 1	202	3	0.1
Banner	28, 33 & 26	C-10	Silo C-10 east 4.7 miles (south on BCR 33)	22.0	Type 2	3,160	1	4.7
Banner	61	C-5	Banner 14 north 1.9 miles	24.0	Type 1	4,180	3	1.9
Kimball	7	D-10	Kimball 46 north 1.5 miles	15.0	Type 1	2,063	3	1.5
Kimball	9	D-10	Kimball 40 north 3.0 miles	23.0	Type 2	2,109	1	3.0
Kimball	12	K-3,4	Kimball 59 east 4.9 miles	24.0	Type 1	10,781	3	4.9
Kimball	14	E-5	Kimball 17 east 4.0 miles	24.0	Type 2	5,867	2	4.0
Kimball	49	F-9	Silo F-9 north 6.9 miles	24.0	Type 2	10,121	2	6.9
Cheyenne	30	H-7	Cheyenne 131 west 0.8 miles	21.0	Type 1	1,540	3	0.8
Cheyenne	34, 131 & 38	H-5,8	Cheyenne 139 east 10.1 miles (north on CCR 131)	22.0	Type 1	20,370	3	10.1
Cheyenne	36	H-8	Cheyenne 121 east 0.8 miles	24.0	Type 1	1,760	3	0.8
Cheyenne	42	G-2	Cheyenne 99 east 1.3 miles	24.0	Type 1	2,860	3	1.3
Cheyenne	52	H-2	Cheyenne 135 east 0.8 miles	22.0	Type 1	1,613	3	0.8
Cheyenne	83	F-5	HWY 30 north 3.4 miles to F-5	24.0	Type 1	7,481	3	3.4
Cheyenne	99	G-2	Cheyenne 40 south 4.0 miles	24.0	Type 1	8,801	3	4.0
Cheyenne	99	G-8	Silo G-8 north 2.6 miles	24.0	Type 2	3,814	2	2.6
				TOTAL		106,302	ton	59.7 mi

Assumed unit wieght of Aggregate Surface Course = 138.9 lb/ft3

SCHEDULE A - SUMMARY OF QUANTITIES

REG.	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	5	16

The following quantities are approximate unless noted as a final pay item. Payment will be made for the actual quantities of work performed and accepted or for materials furnished in accordance with the contract.

ITEM NO.	ITEM DESCRIPTION	UNIT	NE OM-AD 36(34) Schedule A	BID SCHEDULE Plan	BID SCHEDULE Bid	REMARKS AND/OR DETERMINATION OF ESTIMATED QUANTITY
15101-0000	Mobilization	LPSM	ALL	ALL	ALL	
15401-0000	Contractor testing	LPSM	ALL	ALL	ALL	
15705-1400	Soil erosion control, sediment log	LNFT	50	50	50	Assumed Quantity
15802-0000	Watering for dust control	LPSM	ALL	ALL	ALL	
30110-0000	Aggregate surface course	TON	70030	70030	73532	138.9 lbs/cf; see note 1
30303-2000	Aggregate surface reconditioning	SY	25978	25978	27276	5% of Total Area
30305-1000	Pulverizing, 2-inch depth	STA	1125	1125	1181	100% of Total Type 1 Length
30305-3000	Pulverizing, 6-inch depth	STA	824	824	865	100% of Total Type 2 Length
62201-0450	Backhoe loader, 4 cubic foot minimun rated capacity bucket, 18-inch width	HOUR	20	20	20	Assumed Quantity
62201-2850	Motor grader, 12 foot minimum blade	HOUR	175	175	175	Assumed Quantity
62301-0000	General labor	HOUR	75	75	75	Assumed Quantity
63502-0700	Temporary traffic control, cone	EACH	60	60	60	See Traffic Control Plans
63504-1000	Temporary traffic control, construction sign	SQFT	436	436	436	See Traffic Control Plans
63509-1000	Flagger	HOUR	960	960	960	See Traffic Control Plans

note 1: includes aggregate surfacing for roadway (65,993 tons), approaches (590 tons), subexcavation backfill (3,247 tons) and extensions beyond missle site approaches (200 tons)

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19273
PROFESSIONAL ENGINEER
4/11/05

SCHEDULE B - SUMMARY OF QUANTITIES

REG.	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	6	16

The following quantities are approximate unless noted as a final pay item. Payment will be made for the actual quantities of work performed and accepted or for materials furnished in accordance with the contract.

ITEM NO.	ITEM DESCRIPTION	UNIT	NE OM-AD 36(34) Schedule B	BID SCHEDULE Plan	BID SCHEDULE Bid	REMARKS AND/OR DETERMINATION OF ESTIMATED QUANTITY
15101-0000	Mobilization	LPSM	ALL	ALL	ALL	
15401-0000	Contractor testing	LPSM	ALL	ALL	ALL	
15705-1400	Soil erosion control, sediment log	LNFT	50	50	50	Assumed Quantity
15802-0000	Watering for dust control	LPSM	ALL	ALL	ALL	
30110-0000	Aggregate surface course	TON	74115	74115	77820	138.9 lbs/cf; see note 1
30303-2000	Aggregate surface reconditioning	SY	27808	27808	29198	5% of Total Length
30305-1000	Pulverizing, 2-inch depth	STA	1125	1125	1181	100% of Total Type 1 Length
30305-3000	Pulverizing, 6-inch depth	STA	961	961	1009	100% of Total Type 2 Length
62201-0450	Backhoe loader, 4 cubic foot minimun rated capacity bucket, 18-inch width	HOUR	20	20	20	Assumed Quantity
62201-2850	Motor grader, 12 foot minimum blade	HOUR	175	175	175	Assumed Quantity
62301-0000	General labor	HOUR	75	75	75	Assumed Quantity
63502-0700	Temporary traffic control, cone	EACH	60	60	60	See Traffic Control Plans
63504-1000	Temporary traffic control, construction sign	SQFT	436	436	436	See Traffic Control Plans
63509-1000	Flagger	HOUR	960	960	960	See Traffic Control Plans

note 1: includes aggregate surfacing for roadway (69,807 tons), approaches (632 tons), subexcavation backfill (3,476 tons) and extensions beyond missle site approaches (200 tons)

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PROFESSIONAL ENGINEER
4/11/05

SCHEDULE C - SUMMARY OF QUANTITIES

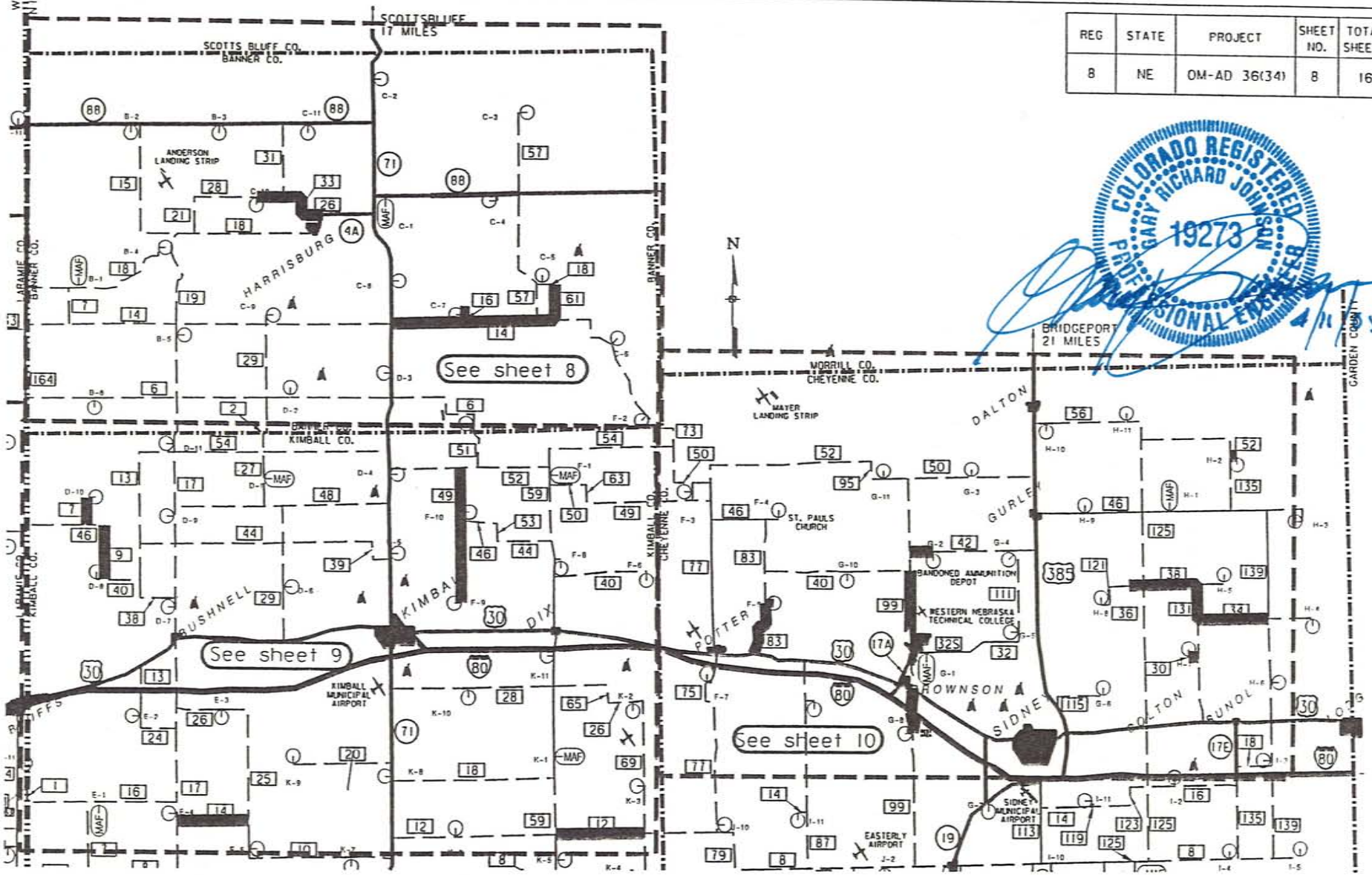
REG.	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	7	16

The following quantities are approximate unless noted as a final pay item. Payment will be made for the actual quantities of work performed and accepted or for materials furnished in accordance with the contract.

ITEM NO.	ITEM DESCRIPTION	UNIT	NE OM-AD 36(34) Schedule C	BID SCHEDULE Plan	BID SCHEDULE Bid	REMARKS AND/OR DETERMINATION OF ESTIMATED QUANTITY
15101-0000	Mobilization	LPSM	ALL	ALL	ALL	
15401-0000	Contractor testing	LPSM	ALL	ALL	ALL	
15705-1400	Soil erosion control, sediment log	LNFT	50	50	50	Assumed Quantity
15802-0000	Watering for dust control	LPSM	ALL	ALL	ALL	
30110-0000	Aggregate surface course	TON	112987	112987	118636	138.9 lbs/cf; see note 1
30303-2000	Aggregate surface reconditioning	SY	42029	42029	44130	5% of Total Length
30305-1000	Pulverizing, 2-inch depth	STA	2033	2033	2134	100% of Total Type 1 Length
30305-3000	Pulverizing, 6-inch depth	STA	1119	1119	1175	100% of Total Type 2 Length
62201-0450	Backhoe loader, 4 cubic foot minimun rated capacity bucket, 18-inch width	HOUR	20	20	20	Assumed Quantity
62201-2850	Motor grader, 12 foot minimum blade	HOUR	175	175	175	Assumed Quantity
62301-0000	General labor	HOUR	75	75	75	Assumed Quantity
63502-0700	Temporary traffic control, cone	EACH	60	60	60	See Traffic Control Plans
63504-1000	Temporary traffic control, construction sign	SQFT	436	436	436	See Traffic Control Plans
63509-1000	Flagger	HOUR	960	960	960	See Traffic Control Plans

note 1: includes aggregate surfacing for roadway (106,302 tons), approaches (955 tons), subexcavation backfill (5,254 tons) and extensions beyond missle site approaches (476 tons)

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	8	16



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GARY RICHARD JOHNSON
19273

LEGEND

- Interstate Route
- Exit Number
- U.S. Route
- State Route
- County Road, paved
- County Road, unpaved
- Missile Site
- Missile Alert Facility
- Project Roads
- Cattle Guard
- Box culvert w/headwalls
- Cities and towns
- Airstrip
- Radio Tower

0 5 10
SCALE IN MILES

NEBRASKA LOCATION MAP

ROADWAY DESCRIPTIONS

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	9	16

Banner County, Nebraska

County Road	mi	Remarks
14	0.0	Begin resurfacing at intersection of State Highway 71
14	8.9	End resurfacing at intersection of Banner County Road 61
16	0.0	Begin resurfacing at intersection of Banner County Road 14
16	0.1	End resurfacing 150' north of approach to Silo C-7
28, 33 & 26	0.0	Begin resurfacing 150' west of approach to Silo C-10
28, 33 & 26	4.7	End resurfacing 4.7 miles along route to the east where pavement begins
61	0.0	Begin resurfacing at intersection of Banner County Road 14
61	1.9	End resurfacing 1.9 miles to the north at intersection of Banner County Road 18

Kimball County, Nebraska

County Road	mi	Remarks
7	0.0	Begin resurfacing at intersection of Kimball County Road 46
7	1.5	End resurfacing 150' north of approach to Silo D-10
9	0.0	Begin resurfacing at intersection of Kimball County Road 40
9	3.0	End resurfacing at intersection of Kimball County Road 46
12	0.0	Begin resurfacing at the intersection of Kimball County Road 59
12	4.9	End resurfacing at the intersection of Kimball County Road 69
14	0.0	Begin resurfacing at the intersection of Kimball County Road 17
14	4.0	End resurfacing at the intersection of Kimball County Road 25
49	0.0	Begin resurfacing 150' south of approach to Silo F-9
49	6.9	End resurfacing 6.9 miles to the north at the intersection of Kimball County Road 52

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ROADWAY DESCRIPTIONS

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	10	16

Cheyenne County, Nebraska

County Road	mi	Remarks
30	0.0	Begin resurfacing at the intersection of Cheyenne County Road 131
30	0.8	End resurfacing 150' west of approach to Silo H-7
34, 131, 38	0.0	Begin resurfacing at the intersection of Cheyenne County Road 139
34, 131, 38	10.1	End resurfacing 1.2 miles to the west of Cheyenne County Road 125 where pavement begins
36	0.0	Begin resurfacing at the intersection of Cheyenne County Road 121
36	0.8	End resurfacing 150' west of approach to Silo H-8
42	0.0	Begin resurfacing at intersection of Cheyenne County Road 99
42	1.3	End resurfacing 150' east of approach to Silo G-2
52	0.0	Begin resurfacing at the intersection of Cheyenne County Road 135
52	0.8	End resurfacing 150' east of approach to Silo H-2
83	0.0	Begin resurfacing at intersection of HWY 30
83	3.4	End resurfacing 150' north of approach to Silo F-5
99	0.0	Begin resurfacing at intersection of Cheyenne County Road 40
99	4.0	End resurfacing 4.0 miles to the south where pavement begins
99	0.0	Begin resurfacing 150' south of approach to Silo G-8
99	2.6	End resurfacing 2.6 miles to the north at HWY 30

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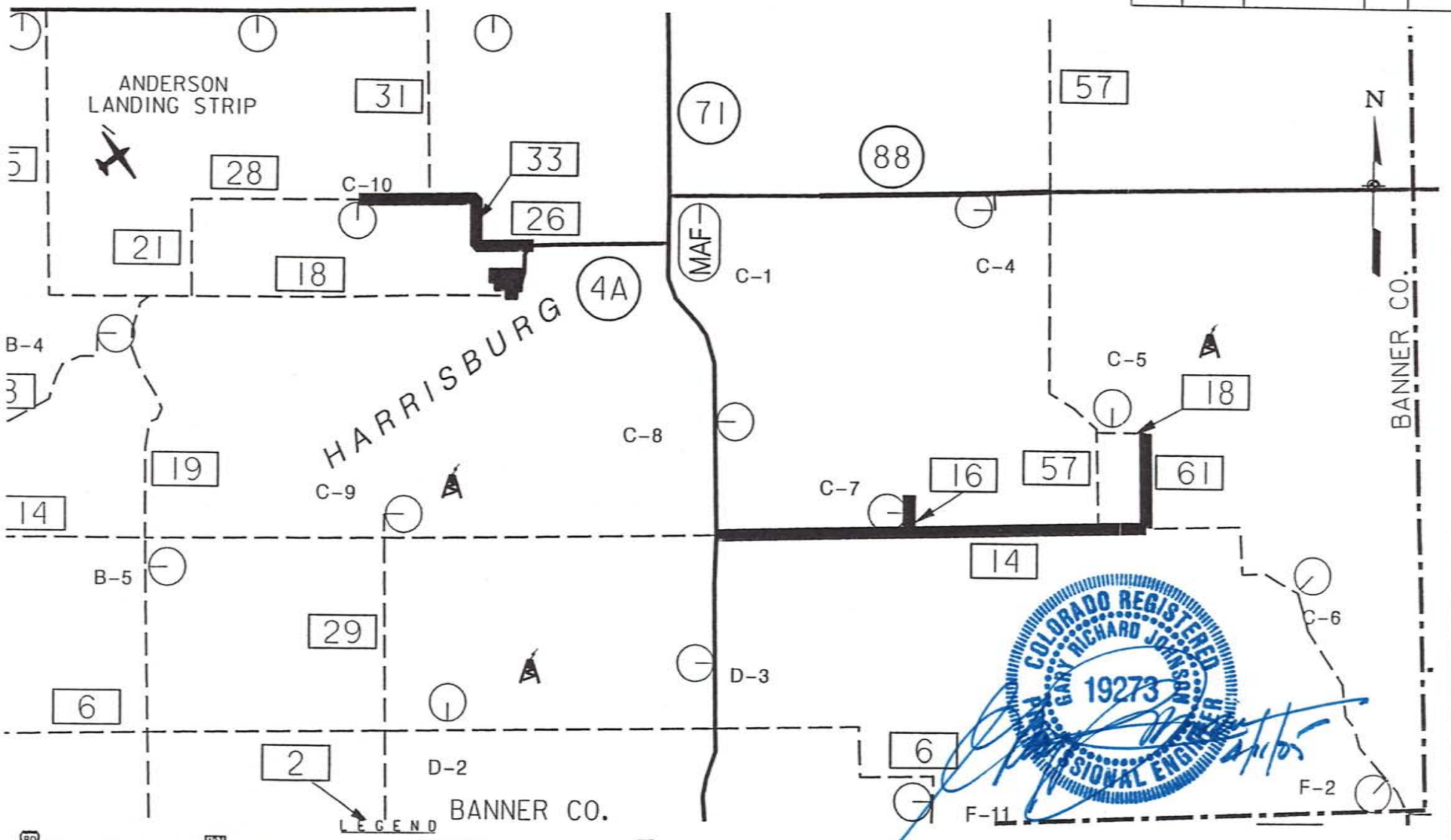
REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	11	16



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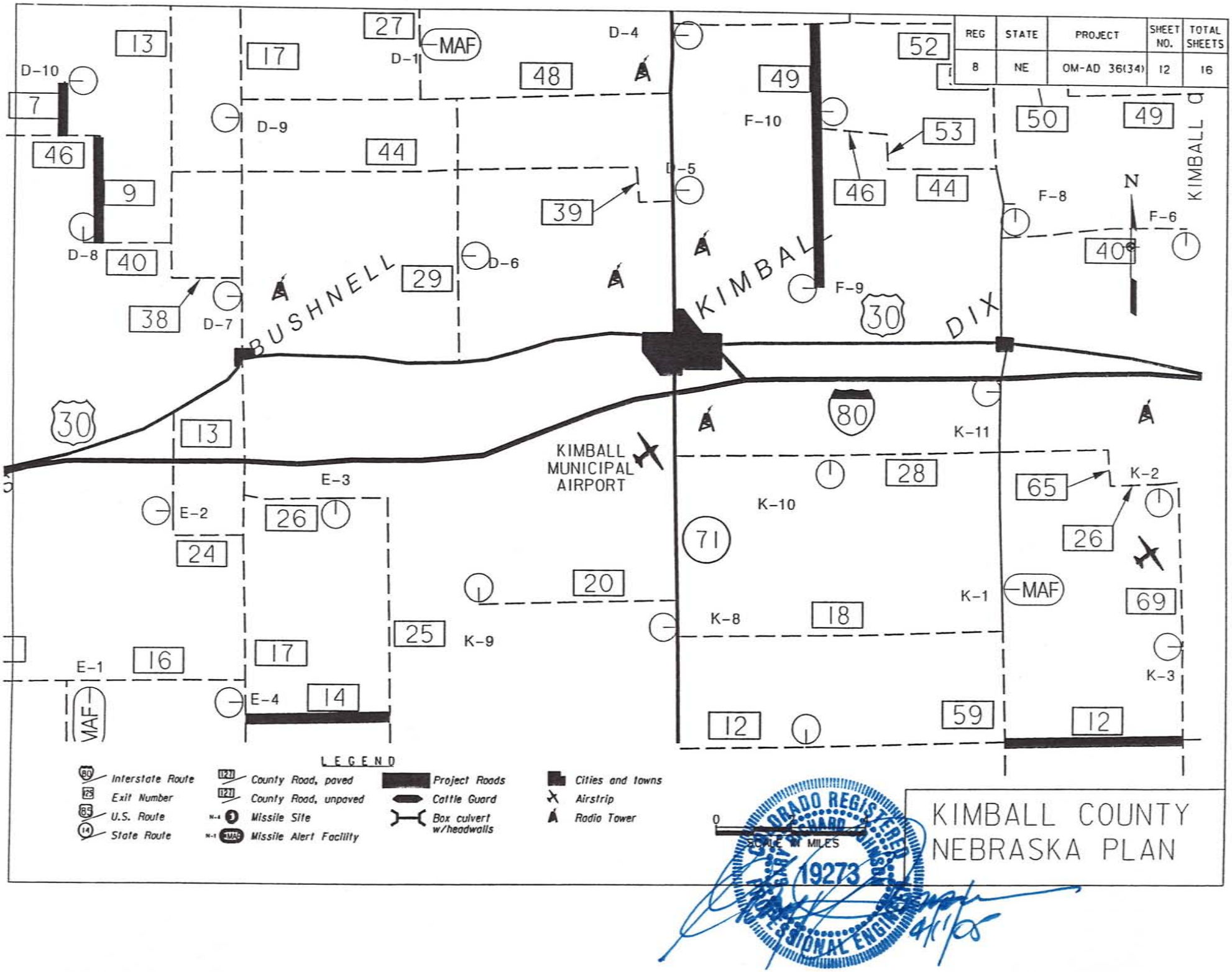
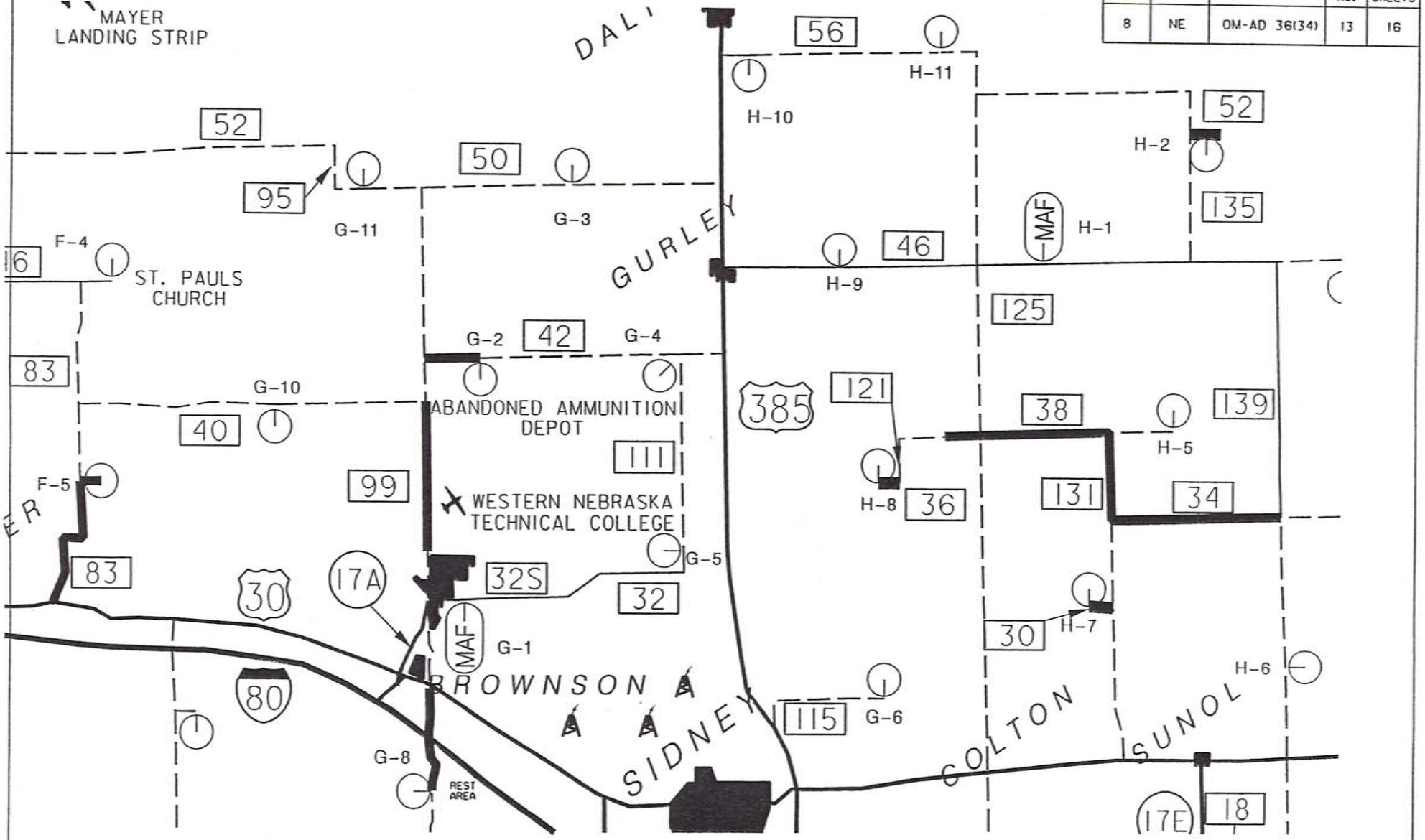
BANNER COUNTY NEBRASKA PLAN


REG | STATE | PROJECT | SHEET NO. | TOTAL SHEETS
8 | NE | OM-AD 36(34) | 12 | 16
BUSHNELL
KIMBALL
DIX
KIMBALL MUNICIPAL AIRPORT
KIMBALL
N
MAF
D-1
D-4
D-5
D-6
D-7
D-8
D-9
D-10
F-6
F-8
F-9
F-10
E-1
E-2
E-3
E-4
K-1
K-2
K-3
K-8
K-9
K-10
K-11
LEGEND
Interstate Route
Exit Number
U.S. Route
State Route
County Road, paved
County Road, unpaved
Missile Site
Missile Alert Facility
Project Roads
Cattle Guard
Box culvert w/headwalls
Cities and towns
Airstrip
Radio Tower
SCALE IN MILES
0
KIMBALL COUNTY
NEBRASKA PLAN
COLORADO REGISTERED
GARY RICHARD JOHNSON
19273
PROFESSIONAL ENGINEER
4/1/05

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	13	16



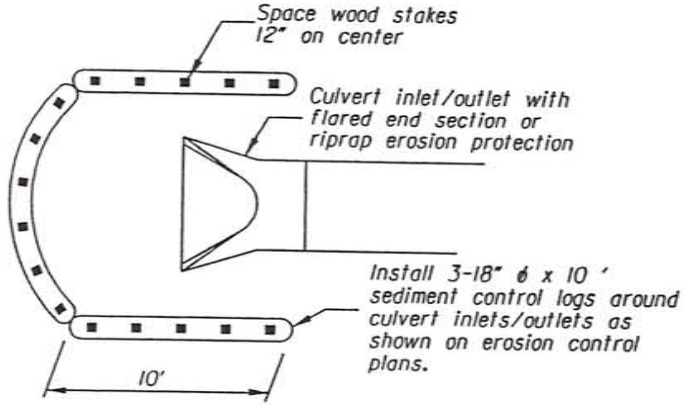
LEGEND

- Interstate Route
- Exit Number
- U.S. Route
- State Route
- County Road, paved
- County Road, unpaved
- Missile Site
- Missile Alert Facility
- Project Roads
- Cattle Guard
- Box culvert w/headwalls
- Cities and towns
- Airstrip
- Radio Tower

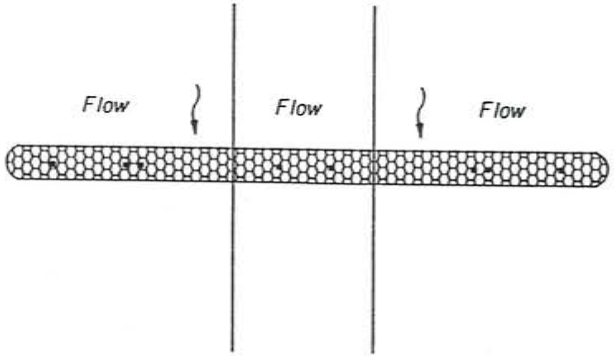
CHEYENNE COUNTY NEBRASKA PLAN

COLORADO REGISTERED
BY RICHARD JOHNSON
19273
PROFESSIONAL ENGINEER
4/11/05

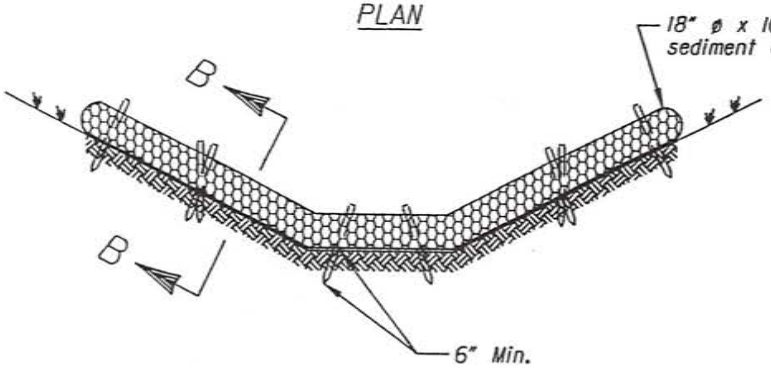
REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	OM-AD 36(34)	14	16



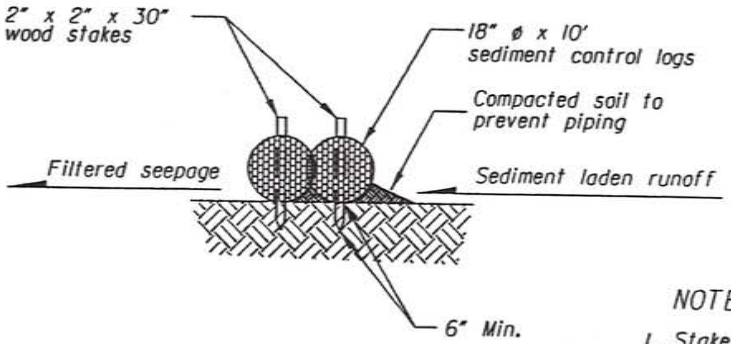
CULVERT INLET/OUTLET SEDIMENT BARRIER



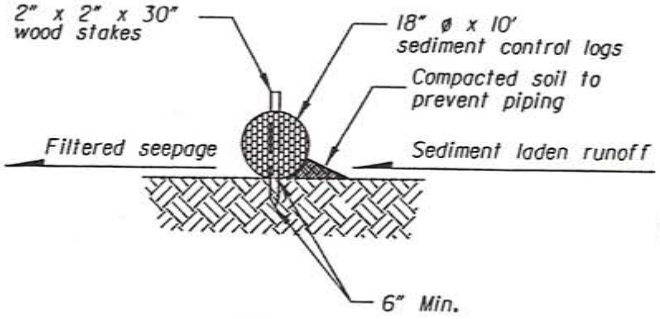
PLAN



ELEVATION



ALTERNATE SECTION B-B ③



SECTION B-B

NOTE:

1. Stake sediment control logs in place with 2" x 2" x 30" wood stakes space no less than 24" apart unless otherwise noted. Drive stakes into ground a minimum of 6".
2. Install sediment control logs directly on ground making sure bottom of log is in full contact with ground. Tamp soil backfill against upstream side of log to assure storm water is forced flow through log rather than under it.

③ Sediment control logs can be spaced every 100 ft in ditches with slopes > 5% when two logs are placed directly next to each other as shown Alternate Section B-B.

SEDIMENT CONTROL LOG SPACING IN DITCHES

Ditch grade	Spacing (feet)
0 - 5%	100
> 5%	50 ③

INSTALLATION OF SEDIMENT CONTROL LOG BARRIER IN DITCH

NO SCALE

COLORADO REGISTERED GARY RICHARD JOHNSON 19273 PROFESSIONAL ENGINEER

4/11/01

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

SPECIAL

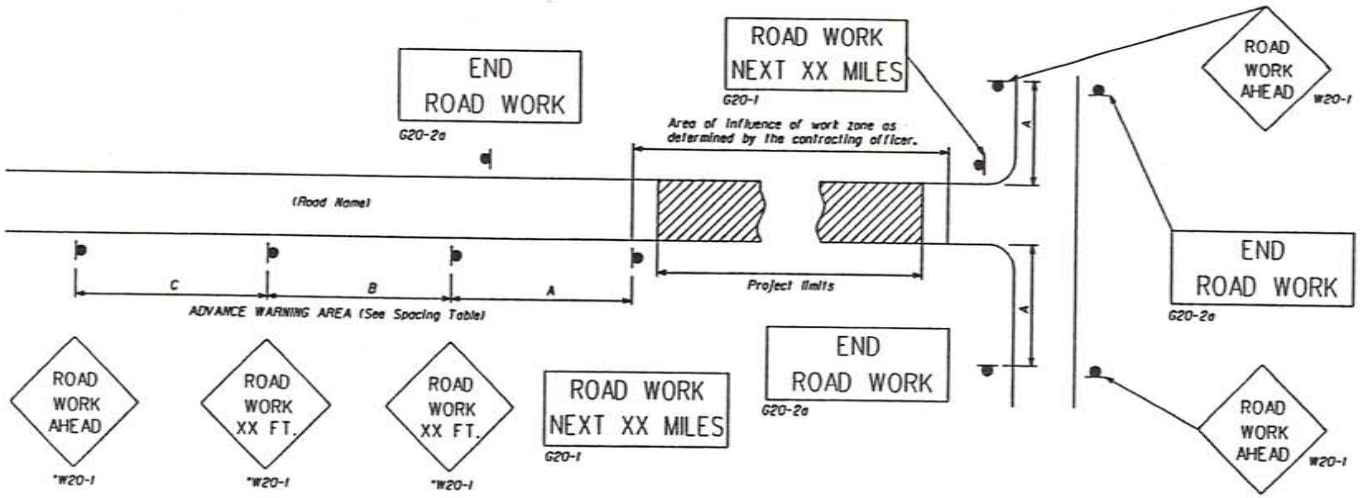
SEDIMENT CONTROL LOGS

PROJECT SPECIFIC DRAWING

REVISED:

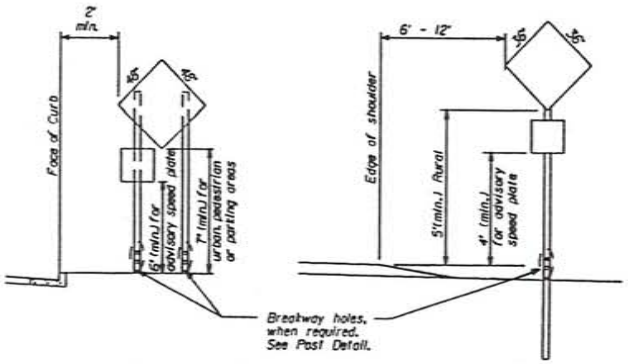
SPECIAL
157-2

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	DM-AD 36(34)	15	16



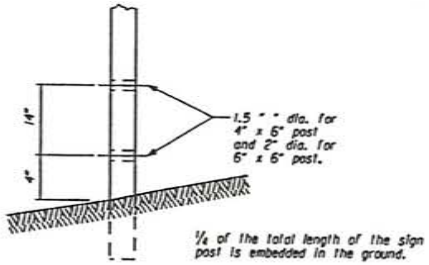
*See note 13

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 45 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

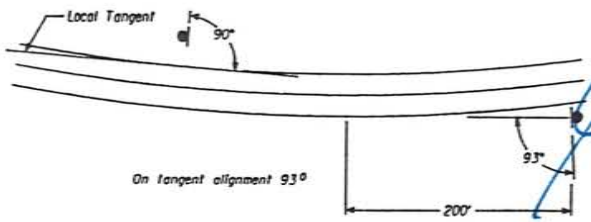


Signs 9 sq ft and under may be mounted on a single 4" x 4" wooden post. Signs wider than 36" or signs with an area over 9 sq ft, use double wooden posts. Steel may be used in lieu of wooden posts (see note *8). At the discretion of the CO, temporary mounting may be used in lieu of wooden posts provided that the duration of work is less than 3 days (see note *8).

SIGN PLACEMENT



POST DETAILS



SIGN INSTALLATION ANGLE

NOTE:

1. Erect all advance warning signs before construction work is started.
2. Where advance warning signs, placed as shown, interfere with permanent signs, locate the warning signs as determined by the CO for best results. Vary messages as required.
3. Install a hazard identification beacon at points of special hazard as a means of calling drivers attention to these locations. Use Type A flashing lights only on isolated vertical panels, barricades, or drums or only on the first two such devices used in a series.
4. For channelizing devices without Type III or higher sheeting, use Type C steady burning lights during non-daylight hours, except those devices with Type A lights as indicated in note 3, above.
5. Additional or different message signs may be required to fit the actual construction conditions.
6. Install advisory speed plates under the W-20 series warning signs as needed to indicate a maximum recommended speed through the construction area.
7. Ensure all wooden sign posts larger than 4" x 4" have breakaway holes as shown.
8. Ensure all posts exposed to impact by traffic meet the requirements of NCHRP-350 for crash worthiness.
9. Maintain two-way traffic during all non-work hours except as approved by the CO.
10. Do not store traffic control devices along the roadway when not in use. Cover post-mounted signs when not applicable.
11. If signing on a roadway under a jurisdiction other than the client agency, verify that an encroachment permit has been obtained.
12. Not all details shown on the traffic control plan sheets may be applicable to this project. The CO may add or delete information and details on these plan sheets as necessary to accommodate the contractors actual operations.
13. The message on the W20-1 signs may be "ROAD WORK AHEAD" or may specify the distance to the work area in feet or in miles. Install three W20-1 signs in series at each installation.
14. When flagger warning sign series extend into project advance warning area, the second and third signs in the flagger series may be placed over the second and third signs in project advance warning series.
15. State standards may be used as an alternative if approved by the CO.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL

WORK ZONE TRAFFIC CONTROL ADVANCE SIGNING

DETAIL APPROVED FOR USE 05/2003

REVISED

DETAIL C635-1

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
8	NE	DM-AD 3613(4)	16	16

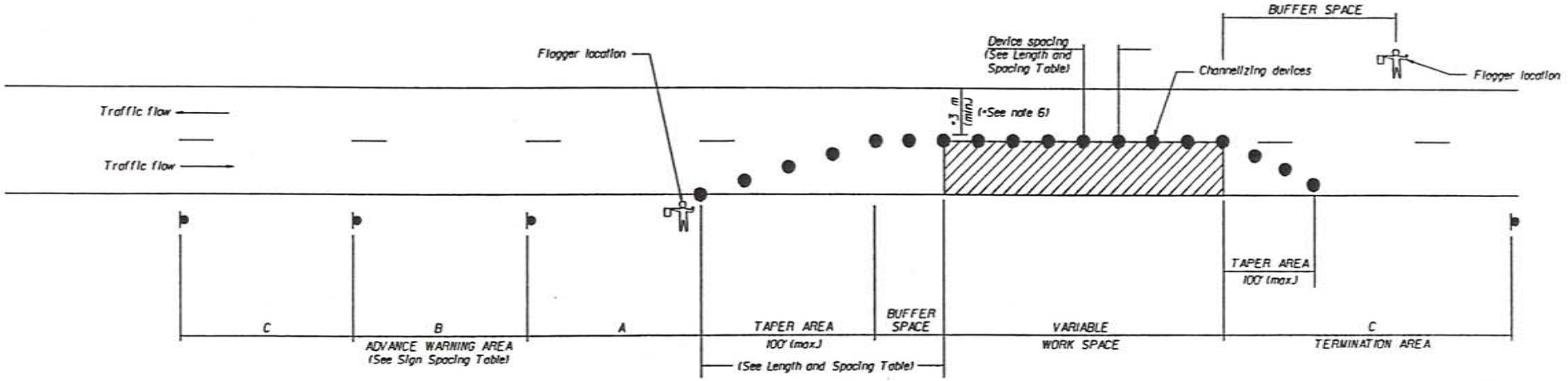
LENGTH AND SPACING TABLE				
APPROACH SPEED * MILES PER HOUR	LENGTH OF BUFFER SPACE IN FEET	CHANNELIZING DEVICE SPACING		
		TAPER AREA	BUFFER SPACE	WORK SPACE
		SPACING IN FEET		
25	55	20	50	50
30	85	20	60	60
35	120	20	70	70
40	170	20	80	80
45	220	20	90	90
50	280	20	100	100
55	335	20	110	110

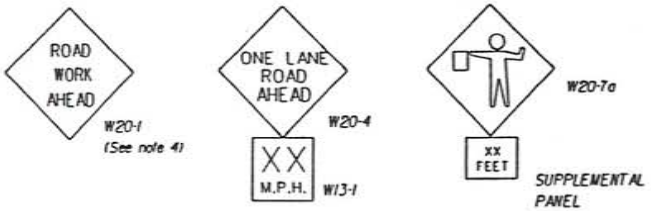
* Speed is based on the regulatory posted speed, not the traffic control warning speed.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. For pilot car operation, mount the PILOT CAR FOLLOW ME (G20-4) sign at a conspicuous location on the rear of vehicle. Prominently display the name of the contractor on the pilot car.
4. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" sign (W20-1) and "END ROAD WORK" sign (G20-2a).
5. For nighttime flagging operation, provide floodlighting at flagger stations.
6. Refer to Special Contract Requirements, Section 156, for project specific minimum width.





G20-2a (See note 4)

END ROAD WORK

CONSTRUCTION SIGN SUMMARY				
MUTCD NO.	SIGN MESSAGE	QTY.	SIZE (IN.)	pay item 63504 1000 CONSTRUCTION SIGN (SQ FT)
G20-2A	"END ROAD WORK"	4	48x24	32
W20-1	"ROAD WORK AHEAD"	8	48x48	128
W20-4	"ONE LANE ROAD AHEAD"	8	48x48	128
W20-7a	FLAGGER	4	48x48	64
W21-3	"ROAD MACHINERY AHEAD"	6	36x36	54
SUPPL. PLATE	"XX FT"	2	24x18	6
W13-1	"XX MPH"	2	24x24	8
G20-1	"ROAD WORK NEXT XX MILES"	2	48x24	16
	TOTAL	36		436

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

SPECIAL

CONSTRUCTION TRAFFIC CONTROL SINGLE LANE CLOSURE LAYOUT (WITH FLAGGERS)

DETAIL APPROVED FOR USE 05/2005

REVISED

DETAIL C635-6

NO SCALE

COLORADO REGISTERED
RICHARD JOHNSON
19273
PROFESSIONAL ENGINEER
4/11/05