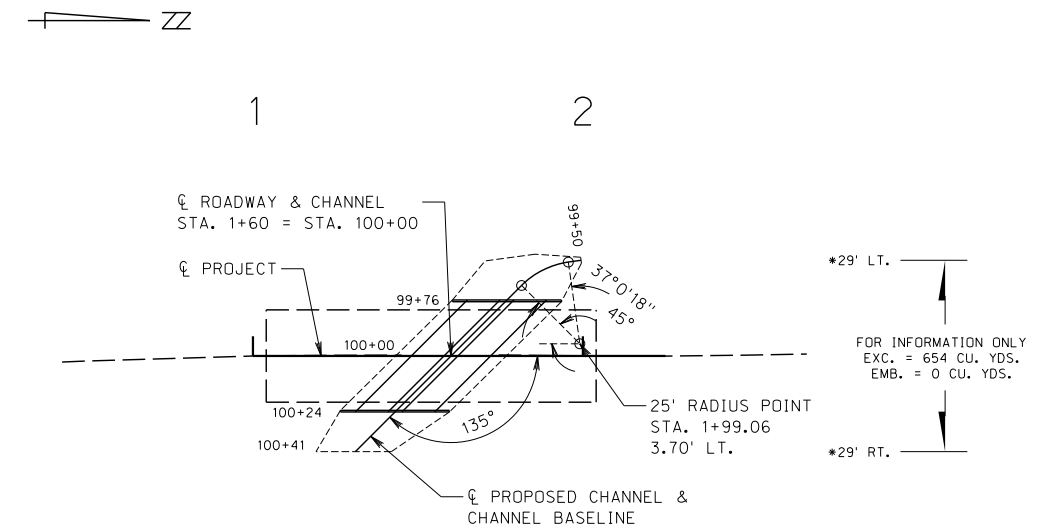
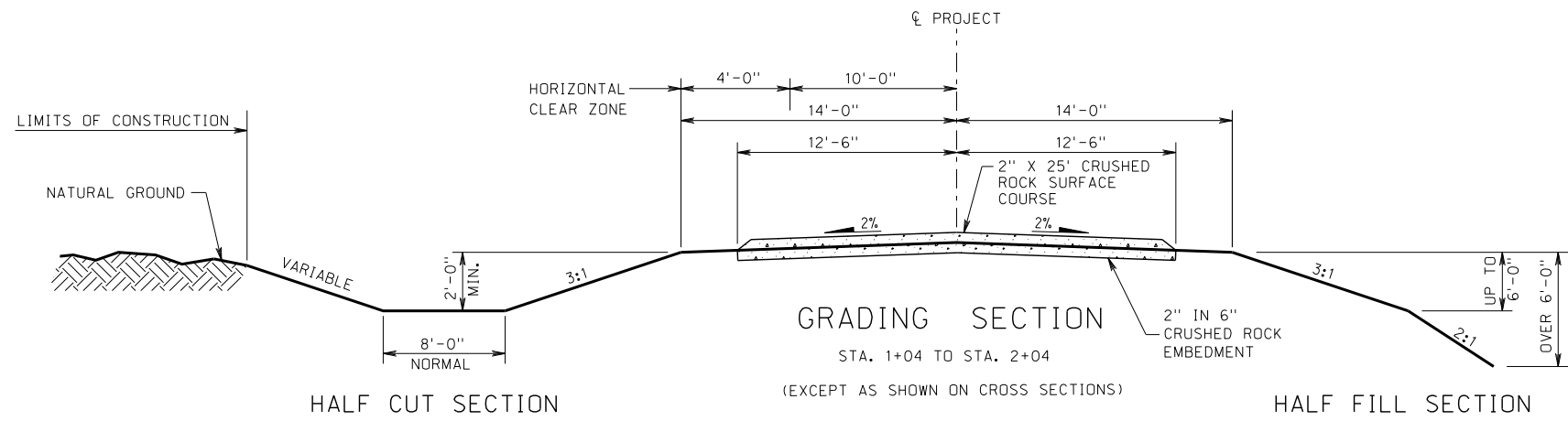


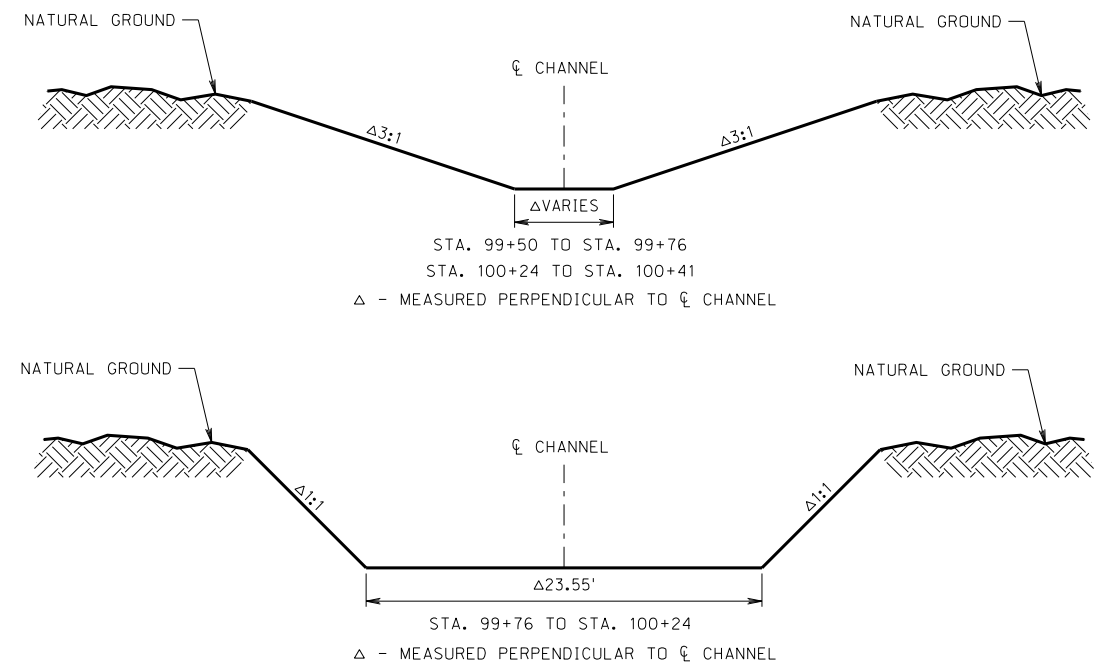
TYPICAL CROSS SECTIONS



CHANNEL LAYOUT
 * - MEASURED PERPENDICULAR TO ϕ OF ROADWAY
 SEE SHEET 2-N FOR CHANNEL DATA

QUANTITIES

ITEM	QUANTITY	UNIT
SITE PREPARATION	1.00	LS
EXCAVATION (ESTABLISHED QUANTITY)	669.00	CY
CRUSHED ROCK SURFACE COURSE	42.00	TONS
CRUSHED ROCK EMBEDMENT	278.00	SY
WATER, APPLIED	3.00	MGAL
COVERCROP SEEDING	1.00	ACRES
SEEDING, TYPE A	1.00	ACRES
MULCH	2.00	TONS
TEMPORARY SILT FENCE	50.00	LF
SILT CHECK, TYPE WATTLE	100.00	LF
EROSION CONTROL, CLASS 1D	107.00	SY
84" CULVERT PIPE, TYPE 5	112.00	LF
PREFABRICATED HEADWALL	2.00	EACH



TYPICAL CHANNEL SECTIONS



TYPICAL CROSS SECTIONS
 OF IMPROVEMENT

RICHARDSON C007406105


906 SOUTH 26th ST.
 LINCOLN, NE 68510
 (402)483-5466
 www.speecelewis.com



EARTHWORK QUANTITIES

STATION TO	STATION	DESCRIPTION	EXCAVATION AVAILABLE (CU. YDS.)	EARTHWORK MEASURED IN EMBANKMENT (CU. YDS.)	BALANCE FACTOR	(+) LONG (-) SHORT
1+04	2+04	ROADWAY	15	444	1.40	-607
99+50	100+41	CHANNEL	654	0	1.40	+654
TOTALS			669	444	1.40	+47

* Pipe volumes subtracted from embankment quantity.



THE LOCATIONS OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES MAY NOT BE INDICATED IN THESE PLANS. UNDERGROUND UTILITIES, WHETHER INDICATED OR NOT WILL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR. NO EXCAVATION WILL BE PERMITTED IN THE AREA OF THE UNDERGROUND UTILITY FACILITIES UNTIL ALL SUCH FACILITIES HAVE BEEN LOCATED AND IDENTIFIED TO THE SATISFACTION OF ALL PARTIES. THE EXCAVATION MUST BE ACCOMPLISHED WITH EXTREME CARE IN ORDER TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITY FACILITY.

UPON COMPLETION OF THE GRADING OPERATIONS PERMANENT SEEDING OF THE DISTURBED AREAS CREATED BY THE GRADING OPERATIONS AND PERMANENT SEEDING OF A 50' WIDE BUFFER STRIP ALONG EACH SIDE OF THE NEW CHANNEL WILL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE PROJECT MANAGER.

ALL SIGNING AND PAVEMENT MARKING WILL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

THE CONTRACTOR MAY CLOSE THE ROAD TO ALL BUT LOCAL TRAFFIC SUBJECT TO THE CONDITIONS PRESCRIBED IN THE 2017 STANDARD SPECIFICATIONS.

THE COUNTY SHALL PROVIDE ROUTING THROUGH TRAFFIC AROUND THE PROJECT IF DEEMED NECESSARY.

UNSUITABLE MATERIAL ENCOUNTERED DURING CONSTRUCTION SHALL BE EXCAVATED AND REPLACED WITH CRUSHED ROCK OR CRUSHED CONCRETE AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL NOT BE REQUIRED TO FURNISH BORROW ON THIS PROJECT.

THE CONTRACTOR SHALL FIND A SUITABLE LOCATION BEYOND THE LIMITS OF THE RIGHT OF WAY TO DISPOSE OF EXCESS MATERIAL.

COMPACTION REQUIREMENTS

ROADWAY EMBANKMENT	CLASS II
EMBANKMENT FOR INTERSECTING PUBLIC ROADS	CLASS II
PRIVATE DRIVES	CLASS I

(SEE SEC. 205 IN THE 2017 SPECIFICATIONS)

BUILD EROSION CONTROL, CLASS 1D, PLAN 501-R7

STATION TO	STATION	SIDE	DESCRIPTION	WIDTH	SO. YDS.
1+04	1+27	LT.	ALL DISTURBED AREA	VARIES	20
1+50	2+04	RT.	ALL DISTURBED AREA	VARIES	62
99+50	99+76	LT.	ON CHANNEL BANKS	VARIES	10
99+50	99+76	RT.	ON CHANNEL BANKS	VARIES	15

BUILD SILT CHECK, TYPE WATTLE, SPECIAL PLAN 1C

STATION TO	STATION	SIDE	TYPE	SPACING	LIN. FT. EACH	TOTAL LIN. FT.
99+50	99+76	LT.	2-HIGH	*	*	20
99+50	99+76	RT.	2-HIGH	*	*	40
100+24	100+41	LT.	2-HIGH	*	*	20
100+24	100+41	RT.	2-HIGH	*	*	20

GEOPAK ALIGNMENT INFORMATION

ALIGNMENT	CHAIN	PROFILE
PROJECT	MAINLINE	PRO.MAINLINE
CHANNEL	CHANNEL	*

DATUM INFORMATION

HORIZONTAL	VERTICAL
NAD 83 (1995)	NAVD 88
D.A.F. = 1.0000627	

MAINLINE

Beginning chain MAINLINE description
 =====
 Point 20 N 103,358.53 E 2,915,675.19 Sta 1+00.00
 Course from 20 to 21 N 2° 40' 13.13" W Dist 125.00
 Point 21 N 103,483.40 E 2,915,669.36 Sta 2+25.00
 =====
 Ending chain MAINLINE description

CHANNEL

Beginning chain CHANNEL description
 =====
 Point 30 N 103,456.51 E 2,915,641.59 Sta 99+49.73
 Course from 30 to PC CHANNEL1 S 10° 39' 55.39" E Dist 3.89
 =====

Curve Data

Curve	Station	Angle	Dist	Easting	Northing
CHANNEL1	99+61.98	N	103,444.46	E	2,915,643.85
Delta	=	37° 00' 17.75" (LT)			
Degree	=	229° 10' 59.22"			
Tangent	=	8.37			
Length	=	16.15			
Radius	=	25.00			
External	=	1.36			
Long Chord	=	15.87			
Mid. Ord.	=	1.29			
P.C. Station	=	99+53.62	N	103,452.68	E
P.T. Station	=	99+69.76	N	103,438.83	E
C.C.	=		N	103,457.31	E
Back	=	S 10° 39' 55.39" E			
Ahead	=	S 47° 40' 13.13" E			
Chord Bear	=	S 29° 10' 04.26" E			

Course from PT CHANNEL1 to 31 S 47° 40' 13.13" E Dist 71.25
 Point 31 N 103,390.85 E 2,915,702.71 Sta 100+41.01
 =====
 Ending chain CHANNEL description

CULVERT PIPE LEGEND

TYPE	DESCRIPTION
1 RCSP	Reinforced Concrete Sewer Pipe
2 RCP	Reinforced Concrete Pipe
3 GCCMP	Galvanized (zinc) Coated Corrugated Metal Pipe
4 ACCMP	Aluminum Coated Corrugated Metal Pipe
5 PCCMP	Polymer Coated Corrugated Metal Pipe
6 HDPE-CI	High Density Polyethylene (corrugated Interior)
7 HDPE-SI	High Density Polyethylene (smooth Interior)
8 PVC	Polyvinyl Chloride Pipe

CONTROL POINTS

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	103776.50	2915636.88	861.66	GPS BASE - 5/8" REBAR
100	102049.58	2915730.12	860.11	E 1/4 CORNER SEC. 23-T2N-R9W 5/8" REBAR
101	103799.90	2915651.80	862.02	P.O.T. 5/8" REBAR

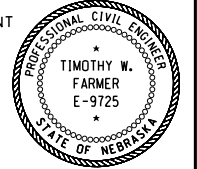
LEGEND

- G --- GAS LINE
- E --- ELECTRICAL SERVICE
- P --- POWER LINE
- OP --- OVERHEAD POWER LINE
- SAN --- SANITARY SEWER
- SS --- STORM SEWER
- T --- TELEPHONE LINE
- FO --- FIBER OPTIC TELE. LINE
- OT --- OVERHEAD TELEPHONE LINE
- TV --- CABLE TV LINE
- OTV --- OVERHEAD CABLE TV LINE
- W --- WATER LINE
- O --- FENCE - CHAIN LINK
- X --- FENCE - R.O.W. OR WIRE
- □ --- FENCE - WOOD
- FLOWLINE
- CENTER LINE DRIVE
- ⊕ BENCH MARK
- ⊙ CENTER PIVOT
- ⊙ CONTROL POINT
- XXXXXXXXX DIKE
- ⊙ GAS METER
- ⊗ GAS VALVE
- ⊕ GRID TICK
- GUARDRAIL
- GUARD POST
- GUY POLE
- GUY WIRE
- ⊙ LIGHT POLE
- ⊕ MAILBOX
- ⊙ MANHOLE
- ⊕ MARSH
- ⊕ OIL WELL
- ⊕ PHOTO CODE POINT
- ⊕ POWER BOX
- ⊕ POWER POLE
- ⊕ POWER PULL BOX
- ⊕ PROPANE TANK
- ⊕ R.O.W. MARKER
- ⊕ ADVANCED R.R. WARNING SIGN
- ⊕ RAILROAD WARNING
- ⊕ RAILROAD TRACKS
- ⊕ RETAINING WALL
- ⊕ SATELLITE DISH
- ⊕ SIGN
- ⊕ TRAFFIC SIGNAL
- ⊕ TRAFFIC SIGNAL/ST. LIGHT
- ⊕ TELEPHONE BOX
- ⊕ TELE. FIBER OPTICS BOX
- ⊕ TELEPHONE PULL BOX
- ⊕ TELEPHONE POLE
- ⊕ TELEVISION BOX
- ⊕ TREE - CONIFEROUS
- ⊕ TREE - DECIDUOUS
- ⊕ TREE STUMP
- ⊕ WATER HYDRANT
- ⊕ WATER VALVE
- ⊕ WATER METER
- ⊕ WELL
- ⊕ WINDMILL

GENERAL INFORMATION

RICHARDSON C007406105

906 SOUTH 26th ST.
 LINCOLN, NE 68510
 (402)483-5466
 www.speecelewis.com



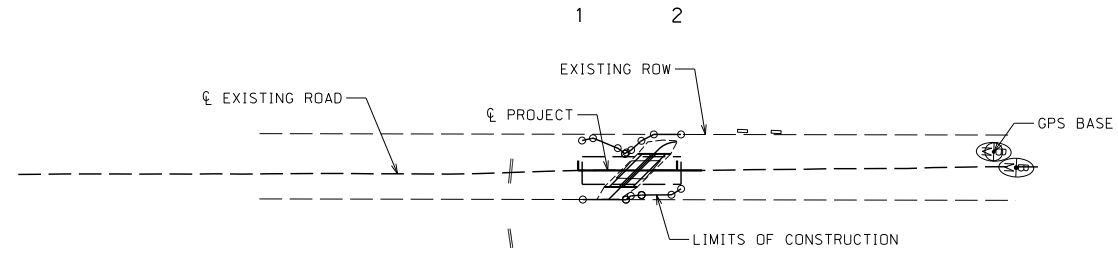
SEC. 25-T1N-R17E

PROJECT NO.	SHEET NO.
C007406105	3
C.N.	

• WARNING:
Gas Main in area
contact owner before
beginning work.



STA. 1+60
DA= 0.56 SQ.MI. $Q_{100} = 1,300\text{cfs}$, $HW_{100} = 7.63'$
BUILD TWIN 84" x 56' CULVERT PIPE TYPE 5 ON 45° SKEW (RHB)
WITH PREFABRICATED HEADWALLS.
PLAN NO. 411-R2.
FILL = 2.8'. SEE SHEET 4



STA. 1+61
EXISTING SINGLE SPAN (1-29') STEEL
MULTIBEAM BRIDGE W/ TIMBER DECK ON A
45° SKEW (RHB). 18'-0" CLEAR ROADWAY.
REMOVE.

- TIES:
- GPS BASE
 - 5/8" REBAR
 - NNW 17.60' NAIL IN SE CORNER OF BRIDGE
 - NNW 32.20' NAIL IN NE CORNER OF BRIDGE
 - E 16.00' E NORTH/SOUTH ROAD
 - NE 27.80' P.O.T., 5/8" REBAR
 - P.O.T.
 - 5/8" REBAR
 - WNW 25.50' NAIL IN NE CORNER OF BRIDGE
 - WSW 25.60' NAIL IN SE CORNER OF BRIDGE
 - SW 27.80' GPS BASE, 5/8" REBAR
 - E 1/4 CORNER SEC. 25-T1N-R17E
 - 5/8" REBAR
 - E 11.00' E NORTH/SOUTH ROAD
 - S 9.50' NAIL IN WASHER IN CORNER FIELD POST
 - W 4.70' BASE OF SIGN

ALL BANDS FOR CULVERT PIPE SHALL BE 2'-0"
WIDE (MINIMUM) UNLESS APPROVED BY THE ENGINEER.

SEC. 30-T1N-R18E

		SEC. 30-T1N-R18E																																								
		B.M. #1: GPS BASE, 5/8" REBAR										B.M. #2: P.O.T., 5/8" REBAR																														
		ELEV. = 861.66										ELEV. = 862.02																														
910																																										910
900																																										900
890		STA. 1+04 BEGIN CONSTRUCTION BEGIN 2' x 25' CRUSHED ROCK SURFACE COURSE										STA. 2+04 END CONSTRUCTION END 2' x 25' CRUSHED ROCK SURFACE COURSE																														
880		STA. 1+04.00 ELEV. 862.09										STA. 2+04.00 ELEV. 862.94																														
870																																										870
860																																										860
850																																										850
840		862.1										862.9																														
830		861.9										863.0																														
820		Datum Elev. = 830.00 ft. Above Sea Level U.S.C. & G.S.																																								820

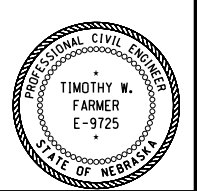
PLAN	DATE
SURVEYED	BY
ALIGNED	
CHECKED	
RIGHT OF WAY CHECKED	
NO.	

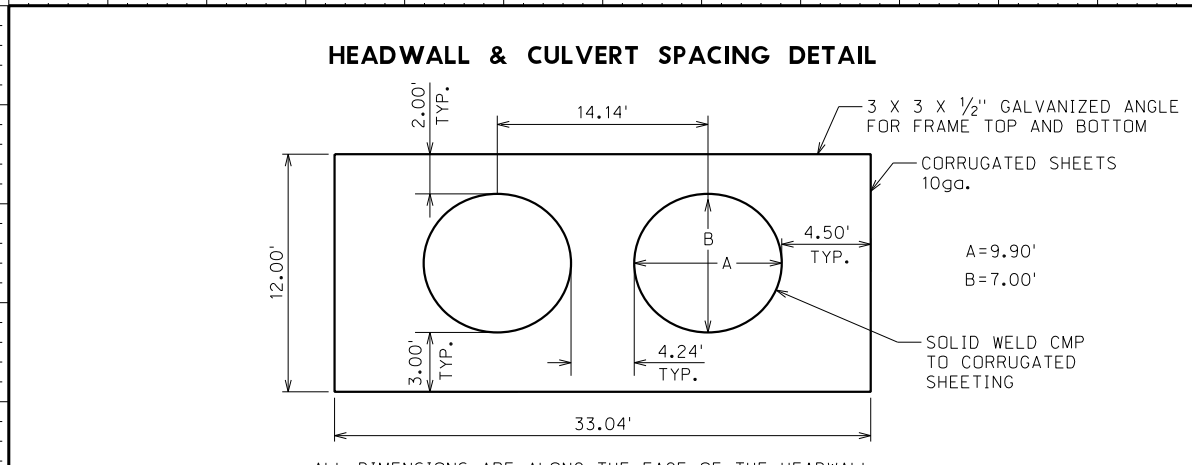
PROFILE	DATE
SURVEYED	BY
GRADES CHECKED	
B.M.'S NOTED	
STRUCTURE NOTATIONS CHKD.	
NO.	

PLAN AND PROFILE

RICHARDSON C007406105

906 SOUTH 26th ST.
LINCOLN, NE 68510
(402)483-5466
www.speecelewis.com





THE CONTRACTOR AT HIS OPTION MAY DRIVE SHEET PILE FOR THE EXTERIOR PORTION OF THE HEADWALL. THE CONTRACTORS SUPPLIER SHALL PROVIDE SHOP DRAWINGS SHOWING APPROPRIATE DETAILS IF THIS METHOD IS USED.

THE PREFABRICATED HEADWALL SHALL BE PARALLEL TO THE PROJECT CENTERLINE. THE HEADWALL SHALL NOT HAVE MORE THAN 1" PER 10' OF DEFLECTION AT ANY POINT FROM THE CENTERLINE OF THE ROAD.

STA: 1+60
DA = 0.56 SO. MI. $Q_{100} = 1,300$ cfs, $HW_{100} = 7.63'$
BUILD TWIN 84" x 56" CULVERT PIPE TYPE 5 ON
45° SKEW (RHB) WITH PREFABRICATED HEADWALLS.
PLAN NO. 411-R2, FILL = 2.8'

