HUMBOLDT CO. A.C.C.PAVEMENT-GRADE & REPLACE NHS-F-169-7(35)--19-46

LETTING DATE 12-3-96

TOTAL
217

PROJECT NUMBER
NHS-F-169-7(35)- -19-46
R.O.W. PROJECT NUMBER
FN-169-7(33)--21-46
PROJECT IDENTIFICATION NUMBER
85-46030-1

IOWA
DEPARTMENT OF TRANSPORTATION
Project Development Division

PLANS OF PROPOSED IMPROVEMENTS ON THE

PRIMARY ROAD SYSTEM
HUMBOLDT COUNTY
A.C.C. PAVEMENT - GRADE AND REPLACE

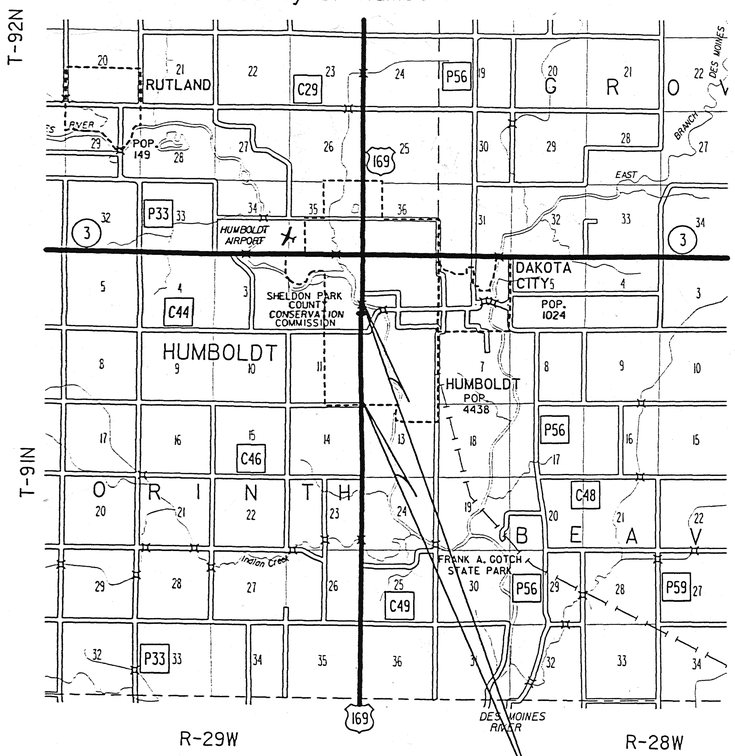
On U.S.#169 in Humboldt - FROM NEAR SOUTH CORP. LIMITS NORTH TO 3rd. AVENUE NORTH

SCALES: As Noted

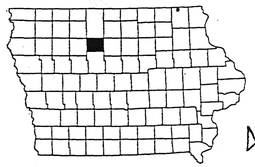
The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, series of 1992, plus current Supplemental Specifications and Special Provisions shall apply to construction work on this project.

Value Engineering Saves. Refer to Standard Notation 203-4 on Sheet C.04

Part of County of Humboldt



Project Location
See Sheet A.02 For Project Limits



LOCATION MAP SCALE
0 1 2 3
Miles

443/R

200

MILEAGE SUMMARY
105-1
09-27-94

DIV.	LOCATION	LIN. FT.	MILES
	URBAN		
	Sta. 215+30 to Sta. 290+50	1350.0	
	TOTAL LENGTH OF URBAN	7520.0	1.424
	OMIT BRIDGE @ STA. 281+90	333.0	0.063
	TOTAL LENGTH OF PROJECT	7187.0	1.361

10-31-95 101-5

DESIGN DATA URBAN

1997	AADT	5700	V.P.D.
2017	AADT	7400	V.P.D.
2017	DHV	760	V.P.H.
TRUCKS		10	%
ESALs per day			

INDEX OF SHEETS
105-3
07-21-87

NO.	DESCRIPTION
A.01	Title Sheet
A.02	Location Map
A.03	Legend Sheet
B.01-B.07	Typical Cross Sections
C.01-C.11	Quantities & General Information
D.01-D.05	Plan and Profile Sheets - Mainline
E.01	Plan and Profile Sheets - Sideroad
G.01-G.02	Reference Ties and Bench Marks
H.01-H.07	Right of Way Sheets (Urban)
L.01-L.10	Geometric and Jointing Details
M.01-M.22	Storm Sewer Sheets
U.01	
V.01	Bridge Situation Plan at Sta. 281+90.02

FOR STANDARD ROAD PLANS, SEE TAB. 105-4, SHEET C.05

THIS PROJECT TO BE LET AS NHS-169-7(35)--19-46

Form 520003 12-97

I hereby certify that this project was constructed in accordance with the contract documents, the "as-built" plans were prepared under my supervision, and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

LICENSED PROFESSIONAL ENGINEER MICHAEL R. KRUGER 15817 IOWA

Project Engineer — Date 8-31-07

My license renewal date is December 31, 2008

1997 Year — REILLY CONST Contractor — D BOFENKAMP Project Inspector

Iowa Department of Transportation

Project Development Division

AUTHORIZED FOR LETTING

DESIGN ENGINEER

Iowa Registration No. 5545 Date 10-9-96

REGISTERED 7341 IOWA DENNIS C. SMITH PROFESSIONAL ENGINEER

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly Registered Professional Engineers under the laws of the State of Iowa.

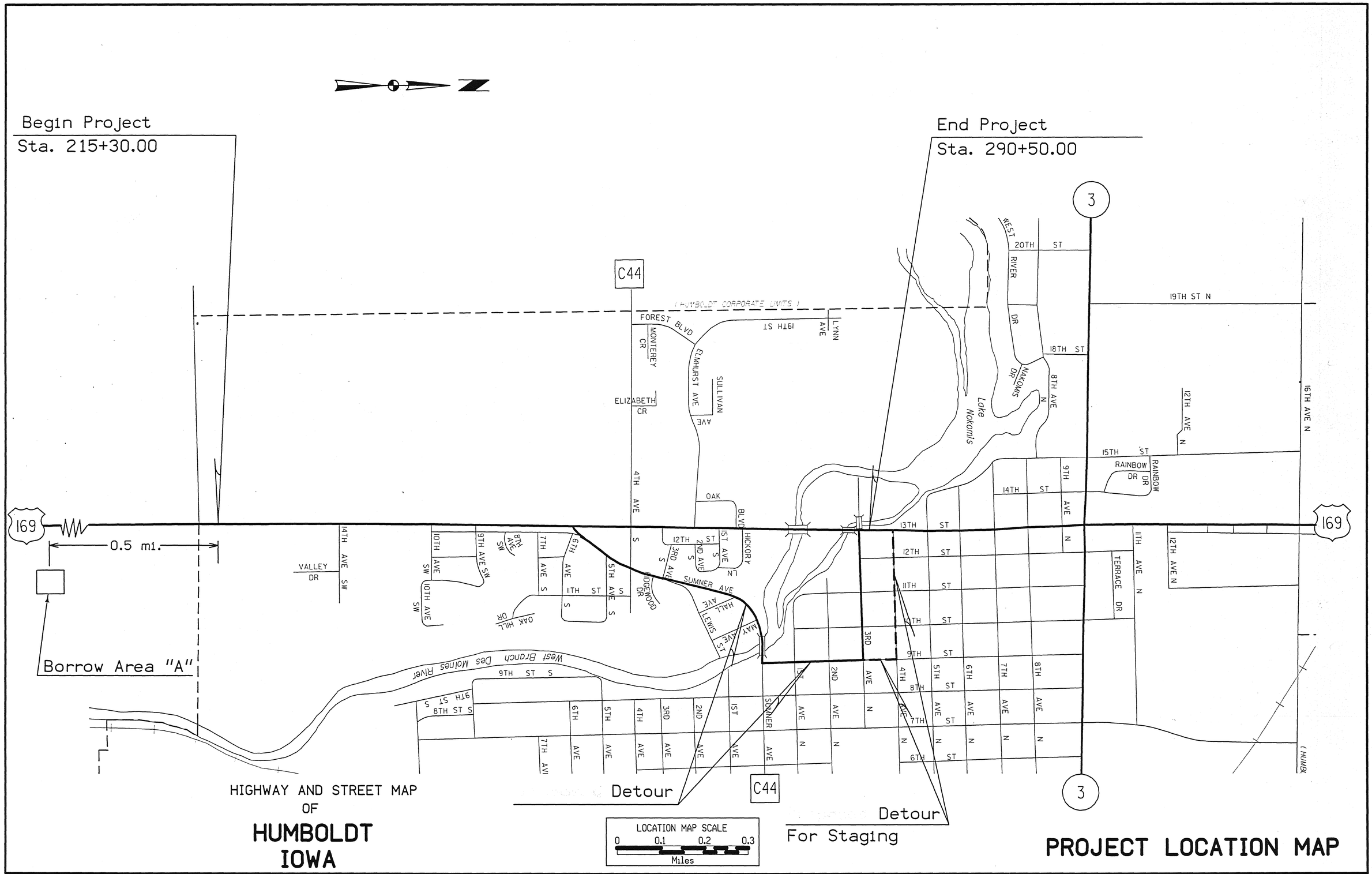
Name

Iowa Registration No. 7341 Date 10-9-96

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED

FOR THE DIVISION ADMINISTRATOR DATE

D1



OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER A.02

1-OCT-1996 12:12 jchiglo /usr/svr1/usr4/ord/4a/k46169027.a02

D1

STANDARD SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- SB Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- G Grave
- CV Cave
- SH Sink Hole
- Board Fence
- Chain Link Fence
- Barbwire Fence
- Security Fence
- Woven Fence
- Barbwire and Woven Fence
- Terrace
- Earth Dam or Dike (Existing)
- Earth Dam or Dike (Proposed)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Proposed Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Proposed Intake
- Existing Utility Access (Manhole)
- Proposed Utility Access (Manhole)

- Fire Hydrant
- WH Water Hydrant (Rural)
- ST Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Luminaire
- Traffic Signal
- Traffic Signal with Luminaire
- TP Telephone Pedestal
- TVP Television Pedestal
- Telephone Pole
- Telephone Pole (Second Company)
- Telephone Pole (Third Company)
- Telephone Pole (Fourth Company)
- Telephone Pole (Fifth Company)
- Power Pole
- Power Pole (Second Company)
- Power Pole (Third Company)
- Power Pole (Fourth Company)
- Power Pole (Fifth Company)
- Electrical Highline Tower (Metal or Concrete)
- Telephone Riser Pole
- Power Riser Pole
- Telegraph Pole
- Satellite TV Dish
- W Existing Water Line
- W2 Existing Water Line (Second Company)
- San. Existing Sanitary Sewer Line
- T Existing Telephone Line
- T2 Existing Telephone Line (Second Company)
- FO Existing Fiber Optics Telephone Line
- St. S. Existing Storm Sewer Line
- G Existing Gas Line
- G-HP Existing High Pressure Gas Line
- G2 Existing Gas Line (Second Company)
- G2-HP Existing High Pressure Gas Line (Second Company)
- E Existing Power Line
- E2 Existing Power Line (Second Company)
- TV Cable Television Line

- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- EB Electric Box
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box

UTILITY LEGEND

- Northwestern Bell Telephone Co., Humboldt
- Iowa Public Service Co., Humboldt
- W City of Humboldt
- San. City of Humboldt
- T Northwestern Bell Telephone Co., Humboldt
- St. S. City of Humboldt
- G Iowa Public Service Co., Humboldt
- E Iowa Public Service Co., Humboldt
- TV Humboldt and Dakota City Cable T.V., Humboldt

RIGHT OF WAY LEGEND

- Proposed Right of Way
- Existing Right of Way
- Existing and Proposed Right of Way
- Easement and Existing Right of Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- Property Line
- A/C Access Control

UNIQUE SYMBOLS FOR THIS PROJECT

- TRP Telephone Repeater Box
- Roadside Telephone
- PTIN Plastic Tile Inlet
- Flag Pole
- FV Flush Valve
- Power Pole with Luminaire
- Power Riser Pole with Luminaire
- Water Fountain

CONVENTIONAL SIGNS

- Survey Line (Station, Reference Point)
- Section Corner
- Proposed Profile Grade
- Railroad
- Field Tile (Existing, Proposed)
- Culverts (Existing, Proposed)
- Stream

Legend And Symbol Information Sheet

(Symbols are Typical Only, actual size may vary)

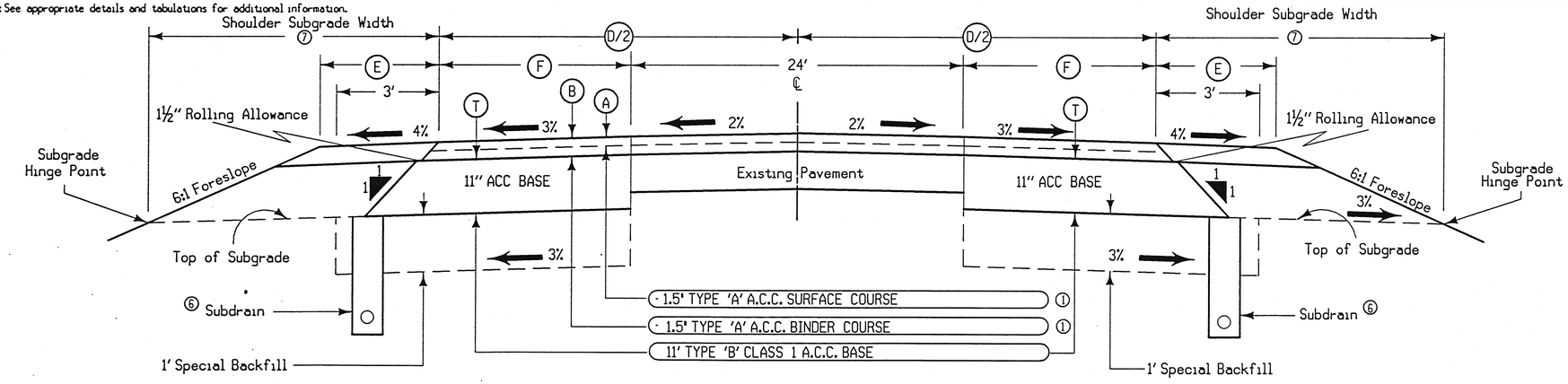
OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)--19-46	SHEET NUMBER A.03

1-OCT-1996 12:13 jchiglo /usr/svr1/usr4/ord/4a/k46169027.a03

01

Note: See appropriate details and tabulations for additional information.

2602-R
MODIFIED



Notes:

① To be placed in one lift.

② See Typical 7102, Sheet B.04, for Details.

③ Taper 4.0' to 14.0'

④ Variable width, see § and sheets D.01 to D.02 for details.

⑤ See Sheet U.02, Detail 535-3, and Typical 7128M, Sheet B.04, for 9' ACC Paved Shoulder with 3' Sloped Curb & Gutter Unit. Located Lt. of Sta. 222+50.00 to Sta. 225+40.00, and Rt. of Sta. 233+00.00 to Sta. 236+78.93.

⑥ Refer to Tabulation 104-9, Sheets C.08 and C.09 and to Standard Road Plan RF-19C

⑦ See Typicals FGE-1, sheet B.03, and UO-1, Sheet B.05.

⑧ See Typical 6147 sheet B.05, for information on transition between curbed and non-curbed roadways.

Notes:

Normal sections shown may be appropriately modified for areas specifically designated by the engineer such as intersections or superelevated curves.

Refer to other drawings for details of shoulder design and construction.

Refer to special detail UO-1 for Barnroof Section.

DESIGN RATES	
ITEM	RATE
Surface Course	145 lbs./cu.ft
Binder Course	145 lbs./cu.ft
Tack Coat	0.05 gal./sq.yd.

TABLE OF DESIGN QUANTITIES

LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		B	A	F	E	T	D/2
U.S. #169	215+30.00 Lt.	217+70.00 Lt.	1.5"	1.5"	② 4.0'	6.0'	11"	16.0'
U.S. #169	217+70.00 Lt.	222+50.00 Lt.	1.5"	1.5"	② ③	8.0'	11"	16'-26'
U.S. #169	222+50.00 Lt.	225+40.00 Lt.	1.5"	1.5"	14.0'	⑤	11"	26.0'
U.S. #169	225+40.00 Lt.	243+00.00 Lt.	1.5"	1.5"	14.0'	8.0'	11"	26.0'
U.S. #169	243+00.00 Lt.	244+50.00 Lt.	1.5"	1.5"	④ ⑧	8.0'	11"	④
U.S. #169	215+30.00 Rt.	219+70.00 Rt.	1.5"	1.5"	----	10.0'	11"	16.0'
U.S. #169	219+70.00 Rt.	220+50.00 Rt.	1.5"	1.5"	② 4.0'	6.0'	11"	16'-26'
U.S. #169	220+50.00 Rt.	222+50.00 Rt.	1.5"	1.5"	② ③	8.0'	11"	26.0'
U.S. #169	222+50.00 Rt.	233+00.00 Rt.	1.5"	1.5"	14.0'	8.0'	11"	26.0'
U.S. #169	233+00.00 Rt.	236+78.93 Rt.	1.5"	1.5"	14.0'	⑤	11"	26.0'

TYPICAL CROSS SECTION
VARIABLE WIDTH ASPHALT CEMENT CONCRETE PAVEMENT WIDENING AND RESURFACING

Note: See appropriate details and tabulations for additional information.

2602-Y
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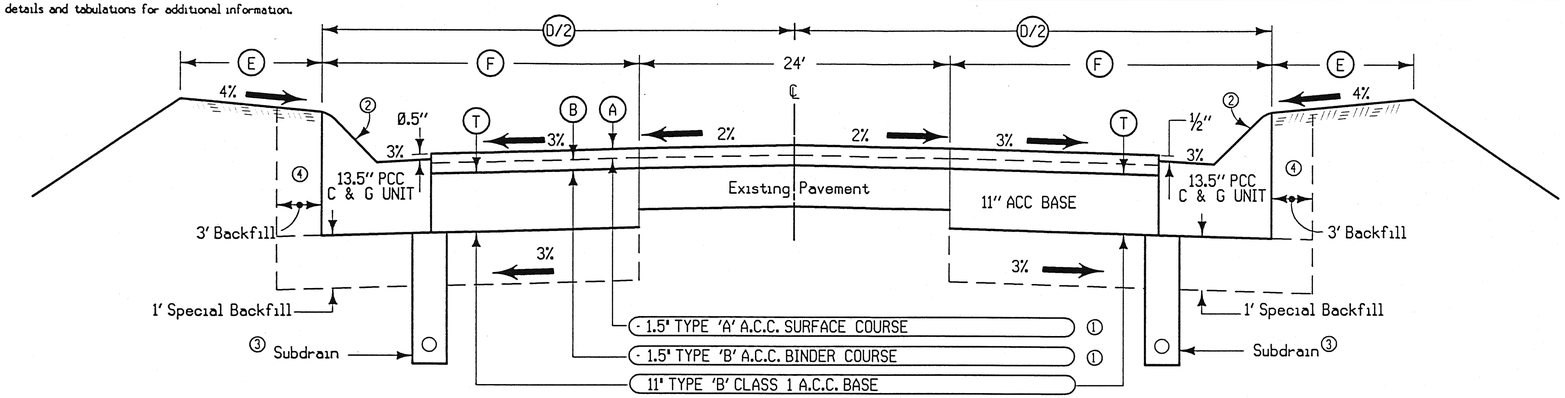

Notes:

① To be placed in one lift.

② See Typical 6130X, Sheet B.03, for details of 3' sloped curb & gutter unit.

③ Refer to Tabulation 104-9, Sheets C.08 and C09 and to Standard Road Plan RF-19C.

④ Excavate and backfill 3'

⑤ See Typical 6147 on Sheet B.05 for information on transition between curbed and non-curbed roadways.

Notes:

Normal sections shown may be appropriately modified for areas specifically designated by the engineer such as intersections or super elevated curves.

Refer to other drawings for details of shoulder design and construction.

DESIGN RATES	
ITEM	RATE
Surface Course	145 lbs./cu.ft
Binder Course	145 lbs./cu.ft
Tack Coat	0.05 gal./sq.yd.

TABLE OF DESIGN QUANTITIES

LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		B	A	F	D/2	T	E
U.S. #169	236+78.93 Rt.	244+50.00 Rt.	1.5"	1.5"	15.0'	27.0'	11"	12.0'
U.S. #169	244+50.00	256+60.00	1.5"	1.5"	15.0'	27.0'	11"	12.0' ⑤

TYPICAL CROSS SECTION
4 LANE ASPHALT CEMENT CONCRETE PAVEMENT WIDENING WITH 3' CURB AND GUTTER UNITS

Note: See appropriate details and tabulations for additional information.

2602-U
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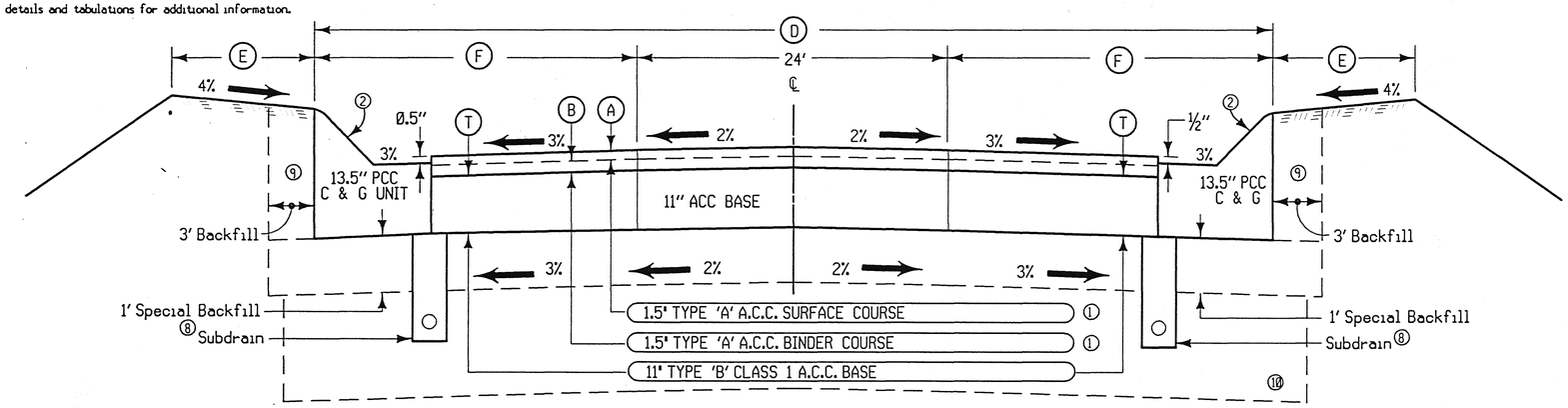

Notes:

1. To be placed in one lift.
2. See Typical 6130X, Sheet B.03, for details of 3' integral 6" sloped curb & gutter units.
3. P.C.C. bridge approach section and bridge. See Sheets D.05, L.10, and U.01 for details.
4. Taper 54.0' to 49.0'
5. Taper 15.0' to 12.5'
6. See Detail UD-2, Sheet B.05, for Special shoulder shaping on both sides.
7. Use 2.5' Standard Curb and gutter unit on north side of 3-rd Ave. N. and U.S. 169 intersection. See Typical 6129, Sheet B.03, for details.
8. Refer to Tabulation 104-9, Sheets C.08 and C.09 and to Standard Road Plan RF-19C.
9. Excavate and backfill 3'
10. Selected Backfill
11. See tabulation 103-3, sheet C.07.

DESIGN RATES	
ITEM	RATE
Surface Course	145 lbs./cu.ft
Binder Course	145 lbs./cu.ft
Tack Coat	0.05 gal./sq.yd.

TABLE OF DESIGN QUANTITIES

LOCATION			DIMENSIONS						(11) DEPTH OF SELECT MATERIAL
ROAD IDENTIFICATION	STATION TO STATION		(B)	(A)	(D)	(F)	(T)	(E)	
U.S. #169	256+60.00	271+50.00	1.5"	1.5"	54.0'	15.0'	11"	12.0'	---
U.S. #169	271+50.00	272+00.00	1.5"	1.5"	54.0'	15.0'	11"	12.0'	0-2.0'
U.S. #169	272+00.00	275+50.00	1.5"	1.5"	54.0'	15.0'	11"	12.0'	2.0'
U.S. #169	275+50.00	276+00.00	1.5"	1.5"	54.0'	15.0'	11"	12.0'	2.0'-0'
U.S. #169	276+00.00	279+50.00*(6)	1.5"	1.5"	54.0'	15.0'	11"	10.0'	---
U.S. #169	279+22.00	284+58.00 (3)	---	---	---	---	---	---	---
U.S. #169	284+58.00	288+80.59	1.5"	1.5"	54.0'	15.0'	11"	12.0'	---
U.S. #169	288+80.59	290+03.98	1.5"	1.5"	(4)	(5)	11"	12.0'	---
U.S. #169	290+03.98	290+50.00 (7)	1.5"	1.5"	49.0'	12.5'	11"	12.0'	---
*Bridge Approach Section									

Notes:

Normal sections shown may be appropriately modified for areas specifically designated by the engineer such as intersections or super elevated curves.

Refer to other drawings for details of shoulder design and construction.

TYPICAL CROSS SECTION
4 LANE ASPHALT CEMENT CONCRETE PAVEMENT WITH 3' CURB AND GUTTER UNIT

Note: See appropriate details and tabulations for additional information.

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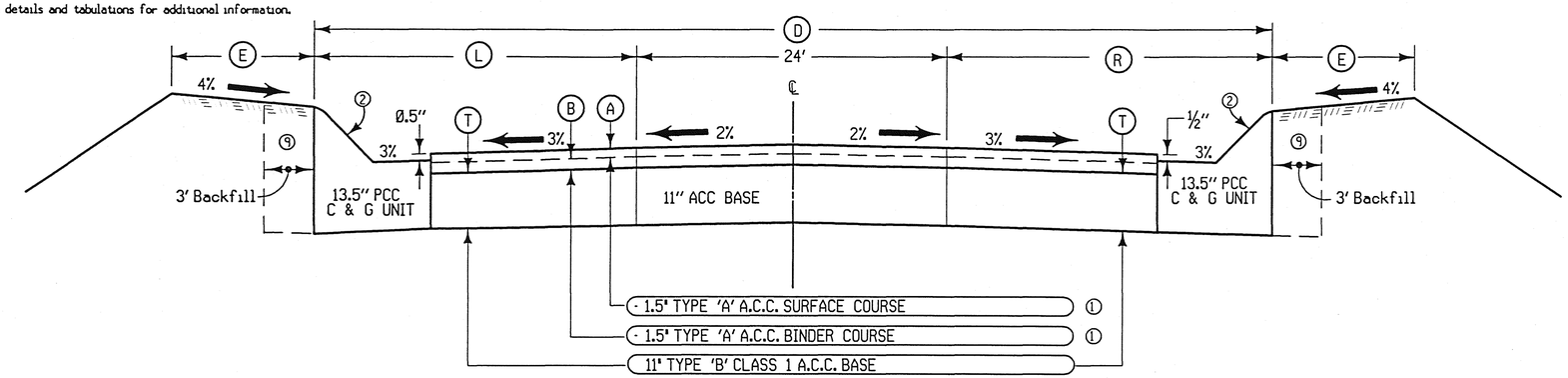


Notes:

1. To be placed in one lift.
2. See Typical 6130X, Sheet B.03, for details of 3' integral 6" sloped curb & gutter units.
3. Transition from 3' sloped curb and gutter unit to 3' standard curb and gutter unit in 5' at the end of the return on side streets.
4. Taper from 12' to 6'.
5. See Sheet L.05.
6. See Sheet E.01 for turn lane information.
7. See Tabulation 102-3, Sheet C.07, for more information.
8. This area does not include the curb and gutter unit.
9. Excavate and backfill 3'

DESIGN RATES	
ITEM	RATE
Surface Course	145 lbs./cu.ft
Binder Course	145 lbs./cu.ft
Tack Coat	0.05 gal./sq.yd.

TABLE OF DESIGN QUANTITIES

LOCATION			DIMENSIONS							(8) AREA OF INTERSECTION
ROAD IDENTIFICATION	STATION TO STATION		(B)	(A)	(T)	(E)	(L)	(R)	(D)	
10th. Ave. S.W.	10237+40.30	10237+65.30	1.5"	1.5"	11"	(4)	6.5'	6.5'	37.0'	138 sq. yds
9th. Ave. S.W.	1242+83.16	1243+28.16	1.5"	1.5"	11"	(4)	6.5'	6.5'	37.0'	208 sq. yds
Sumner Ave.	2256+40.29	2256+78.29	1.5"	1.5"	11"	(4)	8.25'	8.25'	40.5'	252 sq. yds
4th. Ave. S.W.	3260+70.67	3261+32.05	1.5"	1.5"	11"	(4)	3.5'	12.5'	40.0'(6)	312 sq. yds
4th. Ave. S.W.	3261+86.05	3262+36.05	1.5"	1.5"	11"	(4)	8.2'	8.2'	40.4'	214 sq. yds
3rd. Ave. S.W.	4265+69.37	4265+94.37	1.5"	1.5"	11"	(4)	6.5'	6.5'	37.0'	107 sq. yds
Elmhurst Ave.	5268+56.23	5269+04.23	1.5"	1.5"	11"	(4)	6.5'	6.5'	37.0'	202 sq. yds
1st. Ave. S.W.	6272+68.36	6273+20.36	1.5"	1.5"	11"	(4)	6.5'	6.5'	37.0'	204 sq. yds
Oak Blvd.	7273+59.56	7274+09.56	1.5"	1.5"	11"	(4)	4.5'	4.5'	33.0'	171 sq. yds
Hickory Lane	8275+48.79	8275+99.79	1.5"	1.5"	11"	(4)	6.5'	6.5'	37.0'	207 sq. yds
3rd. Ave. N.	9288+95.59	9289+21.38	1.5"	1.5"	11"	(4)	3.5'	3.5'	31.0'(7)	97 sq. yds
3rd. Ave. N.	9289+72.79	9290+20.09	1.5"	1.5"	11"	(4)	8.5'	8.5'	41.0'	261 sq. yds

Notes:

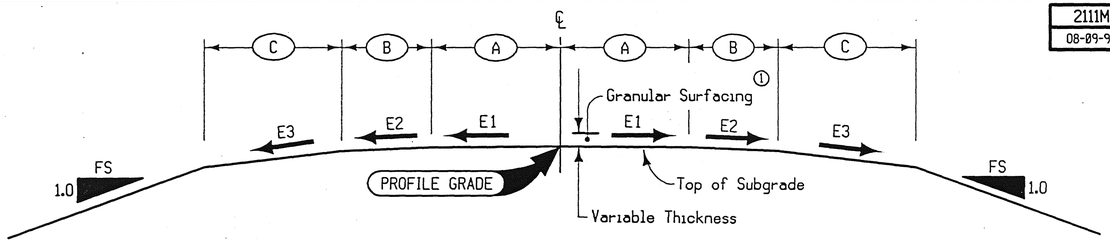
Normal sections shown may be appropriately modified for areas specifically designated by the engineer such as intersections or super elevated curves.

Refer to other drawings for details of shoulder design and construction.

TYPICAL SIDE STREET CROSS SECTION
ASPHALT CEMENT CONCRETE PAVEMENT WITH 3' CURB AND GUTTER UNIT

D1

2111M
08-09-96



① See tabulation 102-3 sheet C.07, for more information.

TYPICAL CROSS SECTION
GRADING
4-Lane Roadway

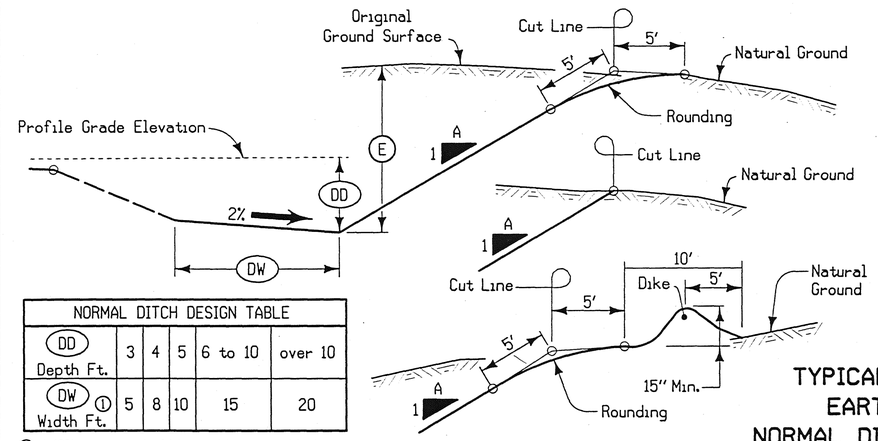
LOCATION			A Feet	B Feet	C Feet	E1%	E2%	E3%	FS
ROAD IDENTIFICATION	STATION TO STATION								
14th Ave. SW	2226+39.24	2227+23.20	12	6.5	12	2	3	4	6

Notes:

Normal sections shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See appropriate Typical Sections in this plan for details of ditches and backslopes.

4101
09-23-86



NORMAL DITCH DESIGN TABLE					
DD Depth Ft.	3	4	5	6 to 10	over 10
DW ① Width Ft.	5	8	10	15	20

① A 100' transition should be used between width changes.

Notes:

For normal conditions, backslopes (A) shall be 2.5 on 1.0 for E depths less than 25', unless specified otherwise. Refer to detail project plans and cross sections for Ditch Depth or for Special Ditches.

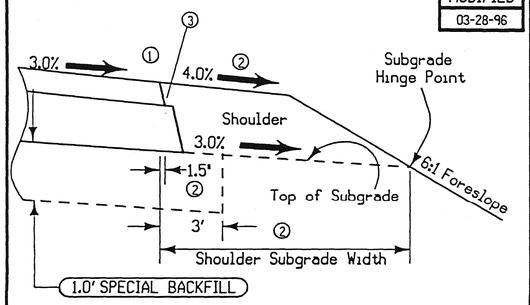
Refer to project plans for locations of areas where rounding of the back slope is not required.

Refer to plans for locations of intercepting ditches. Dike for intercepting ditch shall be made by taking earth from roadway side. Do not excavate back of dike.

TYPICAL CROSS SECTION
EARTH EXCAVATION
NORMAL DITCH AND BACKSLOPE

FGE-1
MODIFIED
03-28-96

Form Grade Elev.

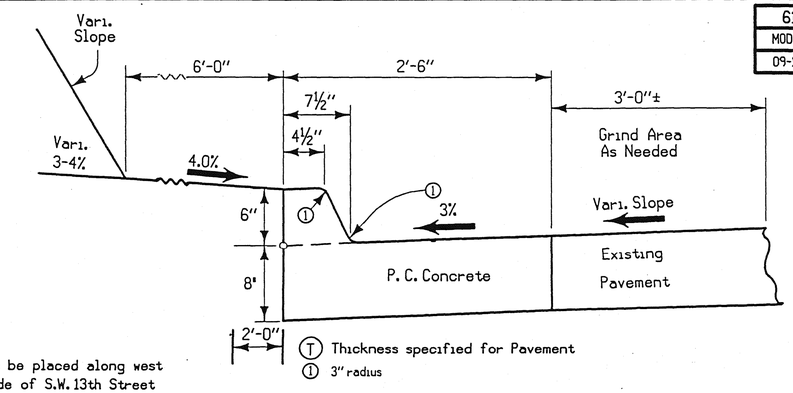


① SEE TYPICAL 2602-R, SHEET B.01.

② Shoulder Width = 6' ---- Shoulder Subgrade Width = 14.2'
Shoulder Width = 8' ---- Shoulder Subgrade Width = 16.0'
Shoulder Width = 10' --- Shoulder Subgrade Width = 17.8'

③ 1.5' Rolling Allowance

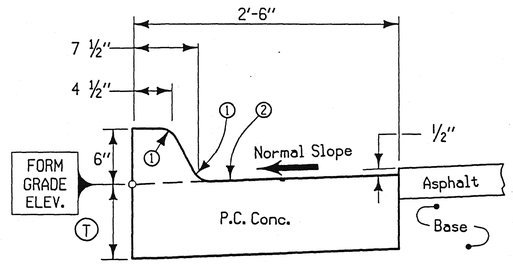
6131
MODIFIED
09-10-92



To be placed along west side of S.W. 13th Street located Rt. of Mainline Sta.237+46± to Sta.250+49.6±

CURB AND GUTTER UNIT
(STANDARD CURB - ADJACENT TO EXISTING PAVEMENT)

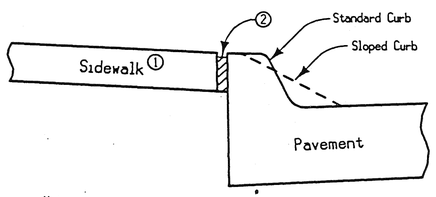
6129M
08-26-96



① 3" radius
② Place "C" Joint at 20' centers. See Standard Road Plan RH-50.
Ⓣ Thickness specified for Pavement

CURB AND GUTTER UNIT
(STANDARD CURB - ADJACENT TO A.C.C.)

6116
11-10-92



Notes:

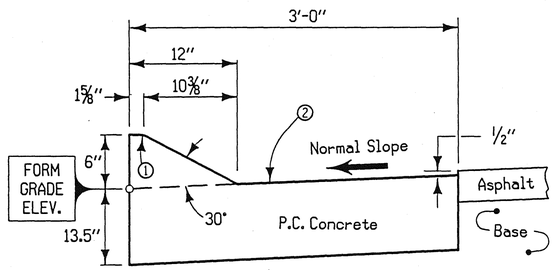
Details are similar where joint is required adjacent to paved drives, parking areas, paved medians, etc. Other jointing requirements shall conform to current specifications for sidewalks.

① or other concrete surface.

② 'E' Joint, see Standard Road Plan RH-52 for details.

DETAIL OF SIDEWALK EXPANSION JOINT

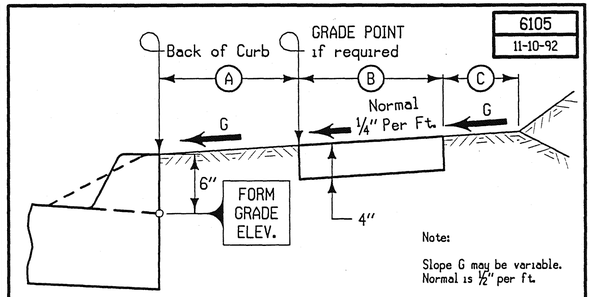
6130
08-12-96



① 2" Radius.
② Place "C" Joint at 20' centers. See Standard Road Plan RH-50.

CURB AND GUTTER UNIT
(SLOPED CURB - ADJACENT TO A.C.C.)

6105
11-10-92



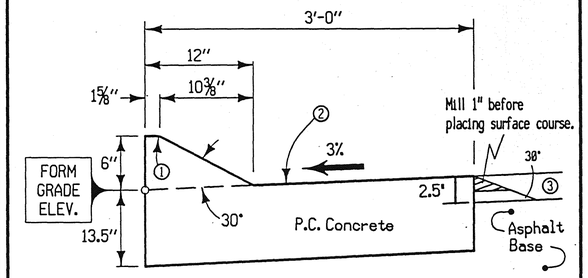
Note:

Slope G may be variable. Normal is ½" per ft.

TYPICAL SIDEWALK DETAILS
(New construction only as shown on detail plans)

STATION TO STATION		SIDE	A Feet	B Feet	C Feet	NEW CONSTRUCTION Sq. Yds.
3261+10	3261+22	Lt		6		10.73
3261+85	3262+19	Lt		5		18.89
289+80		Rt		4		7.56

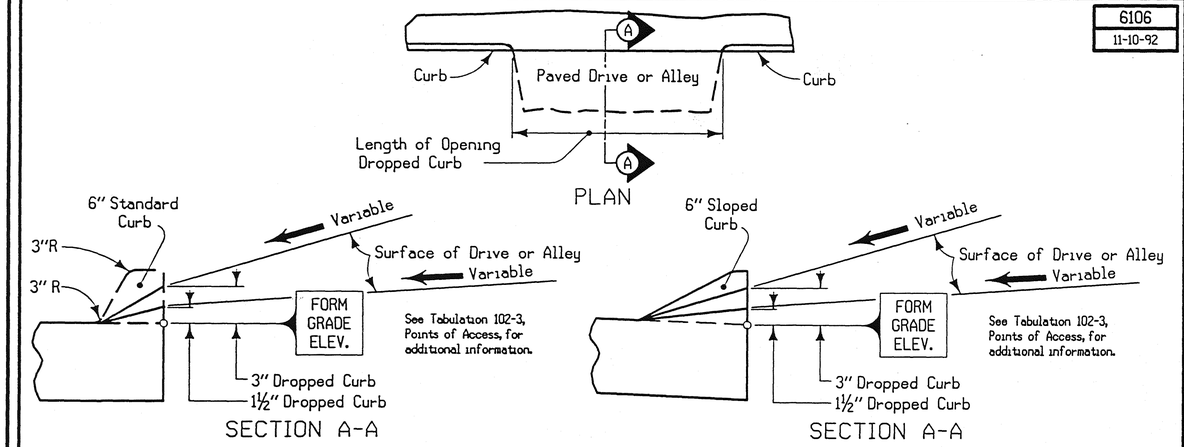
6130X
10-22-93



① 2" Radius.
② Place "C" Joint at 20' centers. See Standard Road Plan RH-50.
③ Fillet to be used when traffic is placed on widening section before it has been resurfaced.

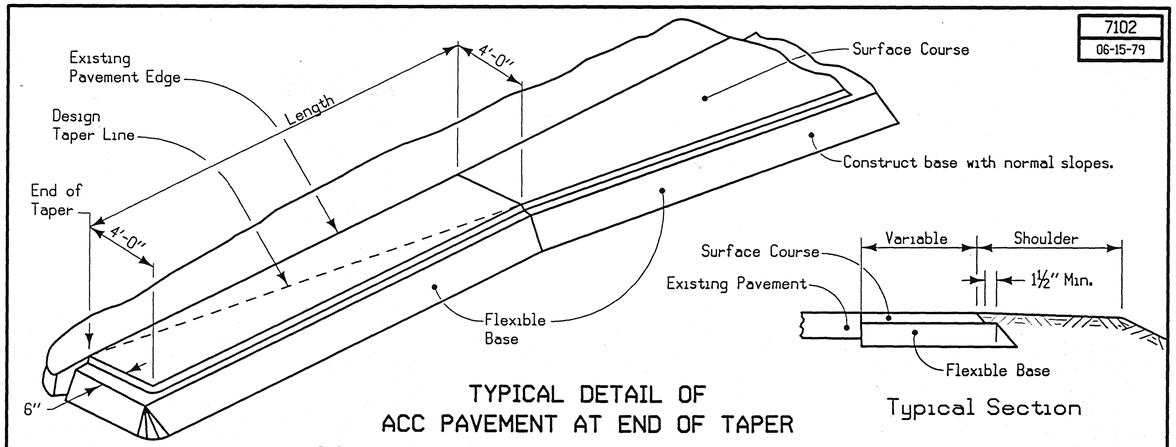
CURB AND GUTTER UNIT
(SLOPED CURB - ADJACENT TO A.C.C.)

6106
11-10-92



TYPICAL DROPPED CURB DETAILS

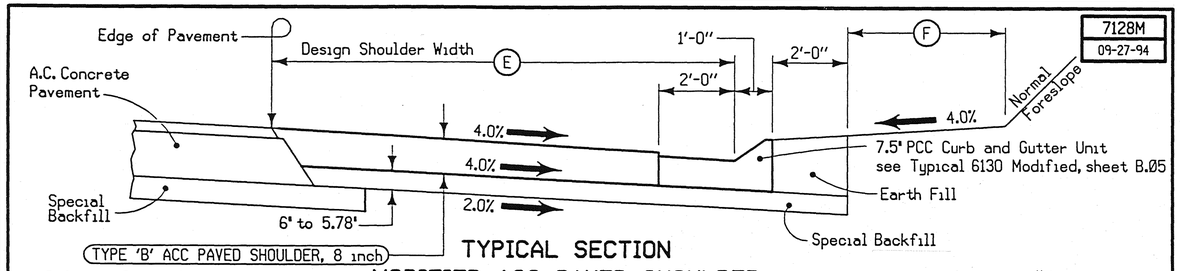
7102
06-15-79



TYPICAL DETAIL OF ACC PAVEMENT AT END OF TAPER

Refer to project plans for exact details of pavement requirements.

7128M
09-27-94



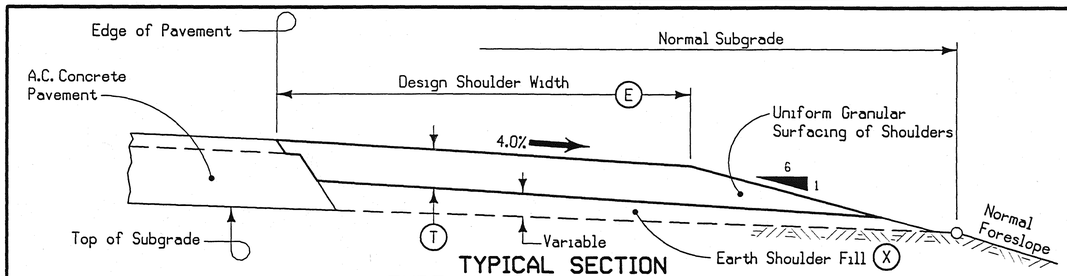
TYPICAL SECTION
MODIFIED ACC PAVED SHOULDER
With PCC Sloped Curb and Gutter Unit

Refer to Detail Sheet 535-3 Modified

Note:
① Per Station Per Side.
② Bid Items

LOCATION				DIMENSIONS		QUANTITIES ①			
ROAD IDENTIFICATION	STATION TO STATION		SIDE	E Feet	F Feet	SURFACE AREA ② Sq. Yds.	TYPE 'B' ACC BASE Tons	CURB & GUTTER P.C. CONCRETE 3' WIDTH ② Lin. Ft.	SPECIAL BACKFILL ② Tons
U.S. #169	222+50	224+97	L	8	6	194	80	247	110
U.S. #169	233+00	237+08	R	8	6	253	104	392	191

7111M
07-15-96



TYPICAL SECTION
TYPE 'A' GRANULAR SHOULDER
Adjacent to ACC Pavement

Note:

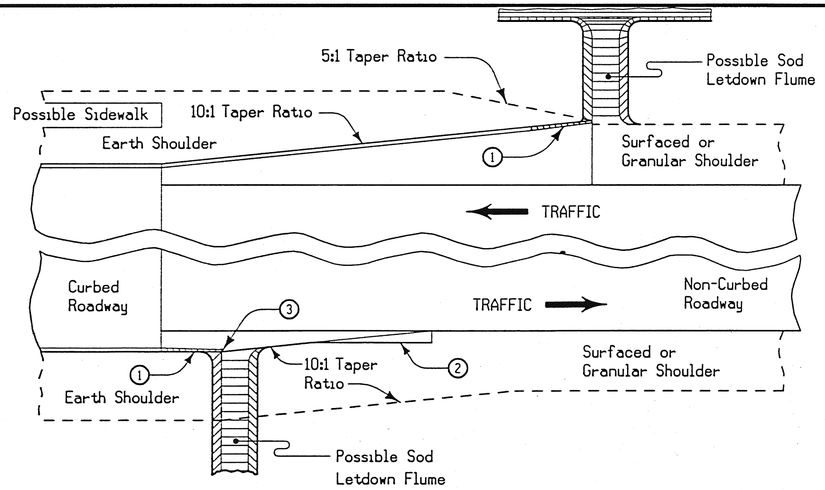
Earth Shoulder fill requires approximately X cubic yards of excavation, including 40 % for shrinkage, per station.

LOCATION			E Feet	T Inches	SIDE	X Cu. Yds.
ROAD IDENTIFICATION	STATION TO STATION					
U.S. #169	215+30	217+70	6	6	Lt.	32.3
U.S. #169	217+70	222+50	8	6	Lt.	37.8
U.S. #169	225+40	244+50	8	6	Lt.	37.8
U.S. #169	215+30	219+70	10	6	Rt.	43.1
U.S. #169	219+70	220+50	6	6	Rt.	32.3
U.S. #169	220+50	233+00	8	6	Rt.	37.8

See Standard Road Plan RJ-260 for construction requirements.

See Sheet B.02 for more information.

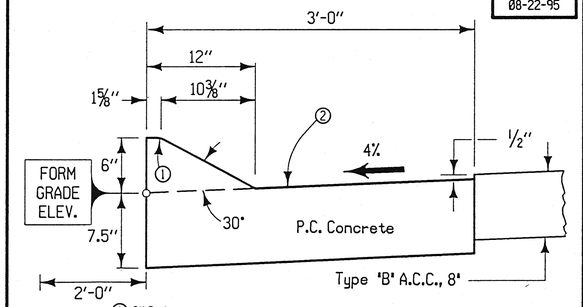
6147
11-10-92



1. Runout curb in 10.0'
2. End of Taper Details see Typical Detail 7101
3. End earth shoulder at the end of the curb transition when no flume is needed.

TRANSITION BETWEEN CURBED AND NON-CURBED ROADWAYS

6130
MODIFIED
08-22-95



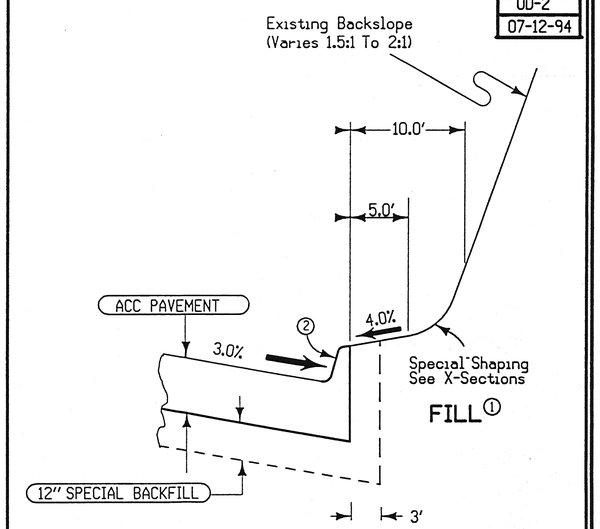
1. 2" Radius.
2. Place "C" Joint at 20' centers. See Standard Road Plan RH-50.

Note:

Use with Type "B" Asphalt Cement Concrete Paved Shoulder Located Lt. of Sta. 222+50 to Sta. 224+97 and Rt. of Sta. 233+00 to Sta. 237+08

CURB AND GUTTER UNIT (SLOPED CURB - ADJACENT TO A.C.C. SHOULDER)

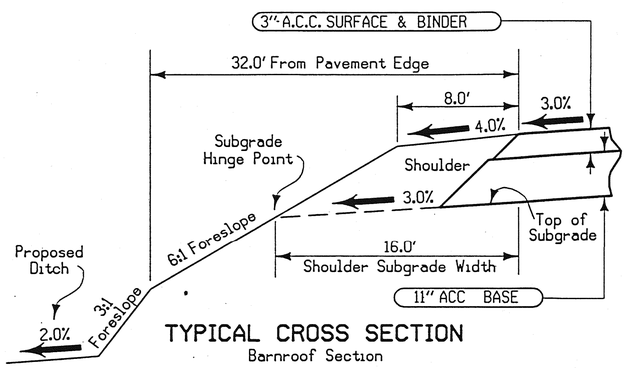
UD-2
07-12-94



1. Backfill
2. Integral 6" Sloped Curb

DETAILS OF SHOULDER SPECIAL SHAPING STA. 276+00 TO STA. 279+50

UD-1
08-09-96

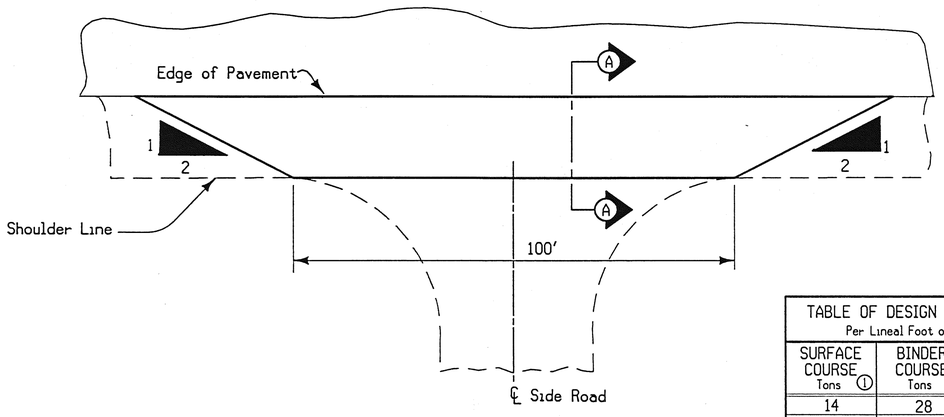


TYPICAL CROSS SECTION

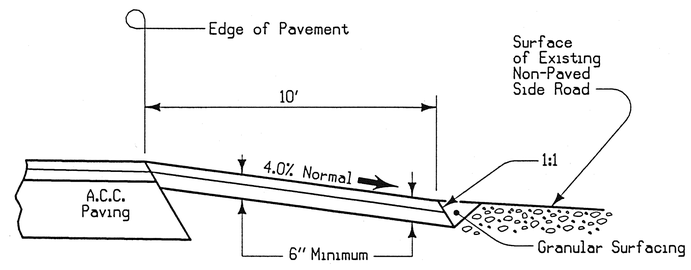
Barnroof Section

ROAD IDENT.	STATION TO STATION	
U.S. #169	225+00.00 RT.	225+40.00 RT.
U.S. #169	226+64.00 RT.	227+00.00 RT.
U.S. #169	224+97.00 LT.	227+00.00 LT.

7148M
08-08-96



PLAN



SECTION A-A

TABLE OF DESIGN QUANTITIES Per Lineal Foot of Fillet		
SURFACE COURSE Tons 1	BINDER COURSE Tons 1	PRIME & TACK Gal. 2
14	28	6.5

Note:

Uniform thickness fillets of asphaltic cement concrete shall be constructed at non-paved side roads.

Fillet sizes as shown are recommended and shall be used for design and estimating purposes. The Engineer shall establish the size of each individual fillet to accommodate conditions at the site.

Special shaping of existing surface prior to placement of fillet may be required by the Engineer and shall be considered incidental to other work on the project.

1. Estimated at 145 lbs./cu. ft.
2. Estimated for 2 applications at 0.05 gal./sq. yd. The tack coat for entrance fillets will be incidental to the project may be eliminated when so directed by the Engineer.

FILLET FOR NON-PAVED SIDE ROADS (Full Depth ACC Paving Project)

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER B.05

D1

TABULATION OF PAVEMENT MARKINGS

108-22
10-31-95

② Broken Center Line (Yellow)
③ Double Center Line (Yellow)
⑤ No-Passing Zone Line (Yellow)
⑥ Broken Lane Line (White)
⑦ Edge Line Right (White)
⑧ Edge Line Left (Yellow)
⑨ Dotted Line (White)
⑩ Solid Lane Line (White)
⑪ Channelizing Line (White)
⑫ Channelizing Line (Yellow)
⑬ Stop Line (White)
⑭ Crosswalk Line (White)
⑮ Yellow Curb
⑯ White Curb

LOCATION				LENGTH (In Stations)														REMARKS
ROAD IDENTIFICATION	STATION TO STATION	SIDE L	SIDE R	②	③	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	
Stage 1																		
U.S. 169	217+20 to 256+13																	A
	217+20 to 219+70																	
Stage 3																		
U.S. 169	212+80 to 224+90																	
U.S. 169	212+80 to 256+13																	B
																		C
Stage 4																		
U.S. 169	212+80 to 256+13																	
																		D
Stage 5																		
U.S. 169	215+30 to 256+13																	
																		E
Stage 5																		
U.S. 169	215+30 to 222+50																	
U.S. 169	219+70 to 222+50																	
U.S. 169	215+30 to 290+50																	F
Wildcat Rd	3257+75 to 3260+71																	
	LENGTH SUBTOTALS			10	215.11		168.2	235.32				2.42		2.36	1.1			
	QUANTITY FACTORS			.25	2	1	.25	1	1	.33	1	2	2	6	1.5			
	TOTALS			2.5	430.22		40.7	235.32				4.84		14.16	1.65			

Pavement markings were not broken down by station or staging. All totals are for temporary and permanent pavement markings.

(A) Paint centerline and edgeline 4' left of existing pavement markings (to be removed)
(B) Centerline will be 17' from back of east edge of curb (widening unit) on U.S. 169.
(C) The white edgeline is 5' from back of east edge of curb (widening unit) on U.S. 169.
(D) Provide no-passing zone line on new ℄ of roadway. Also provide white broken lane line to distinguish 12' lanes.
(E) Pavement markings after placing binder.
(F) Final pavement markings

TABULATION OF PAVEMENT MARKING SYMBOLS AND LEGENDS

108-29
12-03-96

ROAD IDENTIFICATION	LOCATION STATION	LOCATION SIDE							X RR	STOP	AHEAD	ONLY	SCHOOL	XING		REMARKS
Wildcat Road	3258+25 to 3260+88	Rt.		2								1				

REFERENCE INFORMATION

100-4A
03-29-94

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2102-0425046 2102-0425070	Selected Backfill Special Backfill A. See Tabulation 103-3, typicals 2602-R, 2602-Y, and 2602-U for information. B. See Removal of Old Pavement reference note for information concerning recycling of pavement for Special Backfill. Includes 11,190 tons of recycled pavement to be used as special backfill. C. This estimate includes 253 tons of special backfill to be used with the A.C.C. paved shoulder. See Typical 7128M, Sheet B.04. D. This estimate includes special backfill to be used to build temporary shoulder
2102-2710070	Excavation, Class 10, Roadway and Borrow. A. Overhaul for this bid item not measured or paid for, but considered incidental to this project. B. See Sheets D.01 to D.05, E.01 for more information. C. Includes 11558 cu. yds. of Borrow. D. This bid item includes 2826 cu. yds. of unsuitable C-3 soil obtained from Borrow 'A' to be used as per RL-1B.
2102-2712015	Excavation, Class 12, Boulders. A. Overhaul for this bid item not measured or paid for, but considered incidental to this project.
2104-2710020	Excavation, Class 10, Channel A. This material shall not be incorporated into this project unless directed by engineer. B. To be disposed of as per Standard Note 213-1. C. See Sheet for information. D. See standard note 203-2 for information on other contracts.
2121-7425010	Granular Shoulders, Type A A. Requires 1670 cu. yds. of earth shoulder fill material which considered incidental to this bid item. This fill is available from Borrow 'A'. B. See Typical 7111M, Sheet B.04, for information. C. No payment for overhaul will be alloved for earth shoulder fill material. D. Earth Shoulder fill material is available on the project from the Borrow. E. If removal of temporary surfacing (used for maintaining local accesses) is required by the Engineer, the work shall be considered incidental to the paving work and shall be disposed of as per Standard Note 213-1.
2122-5192080	Paved Shoulder, Type B Asphalt Cement Concrete, 8 in. A. See Typical 7128M, Sheet B.04 for informmation.
2123-7450020	Shoulder Finishing, Earth. A. Includes 85 stations of 12' wide shoulders, 7 stations of 10' wide shoulders, and 26 stations of 6' wide shoulders. B. Material for the earth shoulder is included in the template quantities.
2213-271330	Excavation, Class 13, for Widening A. Sta 212+80± to 219+70± Rt. and sta 217+20± to 256+13± Lt. B. To be wasted over shoulder.
2213-6745700	Removal of Flumes.
2214-5145150	Pavement Scarification. A. See Typical 6131 Modified and 6130X, sheet B.03 for details. B. Scarification on typical 6131 Modified to improve surface profile for curb & gutter section. C. Includes 76 sq. yds. of scarification for fillet.
2301-0685100	Bridge Approach Section. A. See Tabulation 112-6 on Sheet C.06 Sheet L.10, and Sheet U.01 for details.
2212-0475095 2303-0375010 2303-0400175 2303-0400475 2303-0525600	Cleaning and Preparation of Base. Asphalt Cement. Asphalt Cement Concrete, Type A Binder Course, 3/4 in. mix. Asphalt Cement Concrete, Type A Surface Coarse, 3/4 in. mix. Base, Type B, Class 1, Asphalt Cement Concrete. A. Includes quantities for Runouts. B. AC Concrete Drives shall be 6" of Type B, Class 1 A.C. Concrete base (82 Tons). C. This will be a ¾" Type B Base. D. The fillet on typical 6130X to be incidental to type B, class 1 base. E. Includes 829 tons for shoulder strengthening from sta 214+50± to 219+70± Rt. and sta. 218+50± to 256+13± Lt. This shoulder is 4' wide and 8" thick.

ROADWAY QUANTITIES

100-0A
03-29-94

CONSTRUCTION USE ONLY	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
	2101-0850002	CLEARING AND GRUBBING	UNIT		3,840.000
	2102-0425046	SELECTED BACKFILL	CY		1,891.000
	2102-0425070	SPECIAL BACKFILL	TON		21,134.790
	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY		43,128.000
	2102-2712015	EXCAVATION, CLASS 12, BOULDERS	CY		39.130
	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY		4,357.000
	2121-7425010	GRANULAR SHOULDERS, TYPE A	TON		1,505.500
	2122-5192080	PAVED SHOULDER, TYPE B ASPHALT CEMENT CONCRETE, 8 IN.	SY		447.000
	2123-7450020	SHOULDER FINISHING, EARTH	STA.		118.000
	2212-0475095	CLEANING AND PREPARATION OF BASE	MILE		0.800
	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY		476.860
	2213-6745700	REMOVAL OF FLUMES	EACH		2.000
	2214-5145150	PAVEMENT SCARIFICATION	SY		382.444
	2301-0685100	BRIDGE APPROACH SECTION	SY		1,340.424
	2303-0375010	ASPHALT CEMENT	TON		1,599.460
	2303-0400175	ASPHALT CEMENT CONCRETE, TYPE A BINDER COURSE,¾IN. MIX	TON		3,010.000
	2303-0400475	ASPHALT CEMENT CONCRETE, TYPE A SURFACE COURSE,¾IN. MIX	TON		4,097.710
	2303-0525600	BASE, TYPE B CLASS 1 ASPHALT CEMENT CONCRETE	TON		19,342.810
	2303-3400000	ADJUSTMENT OF FIXTURES	EACH		12.000
	2303-6911222	ASPHALT CEMENT CONCRETE PAVEMENT SAMPLES	LS		1.000
	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON		604.900
	2402-0425031	GRANULAR BACKFILL	TON		951.470
	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY		243.000
	2416-0100015	APRONS, CONCRETE, 15 IN. DIA.	EACH		7.000
	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH		2.000
	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH		4.000
	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.	EACH		2.000
	2416-0150060	APRONS, CONCRETE, REMOVE AND REINSTALL, 60 IN. DIA.	EACH		2.000
	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF		144.000
	2416-1180060	CULVERT, CONCRETE ROADWAY PIPE, 60 IN. DIA.	LF		52.000
	2416-4005015	GUARD, PIPE APRON, 15 IN.	EACH		1.000
	2416-4005018	GUARD, PIPE APRON, 18 IN.	EACH		1.000
	2416-4005024	GUARD, PIPE APRON, 24 IN.	EACH		1.000
	2416-8325040	TEE-SECTION, CONCRETE PIPE, 15 IN. ON 15 IN.	EACH		1.000
	2416-8325080	TEE-SECTION, CONCRETE PIPE, 18 IN. ON 18 IN.	EACH		1.000
	2417-0225015	APRONS, METAL, 15 IN. DIA.	EACH		1.000
	2417-1060015	CULVERT, CORRUGATED METAL ROADWAY PIPE, 15 IN. DIA.	LF		77.000
	2417-2550015	ELBOWS, CORRUGATED METAL PIPE, 15 IN. DIA.	EACH		2.000
	2422-0360024	APRONS, UNCLASSIFIED, 24 IN. DIA.	EACH		2.000
	2422-0360036	APRONS, UNCLASSIFIED, 36 IN. DIA.	EACH		2.000
	2422-1722024	***CULVERT, UNCLASSIFIED ENTRANCE PIPE, 24 IN. DIA.***	LF		31.000
	2422-1722036	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 36 IN. DIA.	LF		39.000
	2502-6745952	REMOVAL OF SUBDRAIN	LF		1,220.000
	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF		13,441.000
	2502-8215812	SUBDRAIN, TILE, 12 IN. DIA.	LF		12.000
	2502-8220196	SUBDRAIN OUTLET, RF-19E	EACH		15.000
	2502-8220206	SUBDRAIN OUTLET, CORRUGATED METAL PIPE, 6"	EACH		61.000
	2503-3220070	EXTENSION UNIT, RA-7	EACH		1.000
	2503-4450030	INTAKE, RA-3	EACH		29.000
	2503-4450050	INTAKE, RA-5	EACH		11.000
	2503-4450060	INTAKE, RA-6	EACH		1.000
	2503-4450080	INTAKE, RA-8	EACH		4.000
	2503-4450166	INTAKE, RA-16C	EACH		1.000
	2503-4450350	INTAKE, RA-35	EACH		3.000
	2503-7275015	SEWER, 1500D STORM, 15 IN. DIA.	LF		2,524.000
	2503-7275018	SEWER, 1500D STORM, 18 IN. DIA.	LF		1,329.000
	2503-7275024	SEWER, 1500D STORM, 24 IN. DIA.	LF		63.000
	2503-7325015	SEWER, 2000D STORM, 15 IN. DIA.	LF		1,439.000
	2503-7325018	SEWER, 2000D STORM, 18 IN. DIA.	LF		14.000
	2503-7325024	SEWER, 2000D STORM, 24 IN. DIA.	LF		142.000
	2503-7326015	SEWER, 2000D JACKED STORM, 15 IN. DIA.	LF		92.000
	2503-7326018	SEWER, 2000D JACKED STORM, 18 IN. DIA.	LF		46.000
	2503-7326024	SEWER, 2000D JACKED STORM, 24 IN. DIA.	LF		148.000

ROADWAY DESIGN

DENNIS C. SMITH
REGISTERED
7341
IOWA
PROFESSIONAL ENGINEER

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly Registered Professional Engineers under the laws of the State of Iowa.

Name Dennis C. Smith

Iowa Registration No. 7341 Date 10-9-96

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)--19-46	SHEET NUMBER C.01

8-OCT-1996 14:17 temp4a /usr/svr1/usr4/ord/4a/k46169027.c01
K46169027.C01

D1

ROADWAY QUANTITIES

100-0A
03-29-94

CONSTRUCTION USE ONLY	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
	2503-8460010	UTILITY ACCESS, RA-1	EACH		1.000
	2503-8460011	UTILITY ACCESS, RA-1, MODIFIED	EACH		1.000
	2503-8460020	UTILITY ACCESS, RA-2	EACH		4.000
	2505-4020170	GUARDRAIL, END ANCHORAGE, BEAM, RE-70	EACH		4.000
	2505-4020250	GUARDRAIL, FORMED STEEL BEAM	LF		150.000
	2505-4020251	GUARDRAIL, FORMED STEEL THRIE BEAM	LF		125.000
	2505-4020400	GUARDRAIL, POSTS, BEAM	EACH		52.000
	2505-4021690	GUARDRAIL, END ANCHORAGE, BEAM, RE-69	EACH		4.000
	2505-6745740	REMOVAL OF GUARDRAIL END ANCHORAGE	EACH		8.000
	2505-6745749	REMOVAL OF GUARDRAIL	LF		330.500
	2505-6745855	REMOVAL OF POSTS	EACH		82.000
	2506-4984000	FLOWABLE MORTAR	CY		64.000
	2510-6745850	REMOVAL OF OLD PAVEMENT	SY		18,007.812
	2511-6745900	REMOVAL OF SIDEWALK	SY		9.000
	2511-7526004	SIDEWALK, P.C. CONCRETE, 4 IN.	SY		37.178
	2512-1725256	CURB AND GUTTER, P.C. CONCRETE, 2.5 FT.	LF		1,238.000
	2512-1725306	CURB AND GUTTER, P.C. CONCRETE, 3.0 FT.	LF		9,607.000
	2515-2475006	DRIVES, P.C. CONCRETE, 6 IN.	SY		674.284
	2515-6745600	REMOVAL OF DRIVES	SY		1,601.267
	2518-6910000	SAFETY CLOSURE	EACH		2.000
	2520-3350010	FIELD LABORATORY	EACH		1.000
	2523-0960400	CONDUIT, RIGID STEEL, 4 IN. DIA.	LF		235.000
	2523-8925945	HANDHOLE, RM-17, AS PER PLAN	EACH		4.000
	2524-9220030	OBJECT MARKER, TYPE 3	EACH		4.000
	2525-2638015	SILT BASIN	EACH		9.000
	2525-2638030	SILT FENCE	LF		1,740.000
	2525-2638031	SILT FENCE FOR DITCH CHECKS	LF		805.000
	2526-8285000	CONSTRUCTION SURVEY	LS		1.000
	2527-9263110	PAINTED PAVEMENT MARKING	STA		729.390
	2527-9263140	PAINTED SYMBOLS AND LEGEND	EACH		3.000
	2527-9263180	PAVEMENT MARKING REMOVED	STA		154.810
	2528-8445110	TRAFFIC CONTROL	LS		1.000
	2528-8445112	FLAGGERS	DAY		43.500
	2533-4980005	MOBILIZATION	LS		1.000
	2599-8447010	TRAINEE REIMBURSEMENT	HOUR		697.000
	2599-9999005	EXTEND SUBDRAIN OUTLET, RF-19E	EACH		3.000
	2599-9999009	10" CASING, BORE AND JACK	LF		62.000
	2599-9999009	14" CASING, BORE AND JACK	LF		108.000
	2599-9999009	12" CASING	LF		260.000
	2601-2632110	FERTILIZING	ACRE		6.500
	2601-2634100	MULCHING	ACRE		4.500
	2601-2642100	STABILIZING CROP SEEDING & FERTILIZING	ACRE		4.430
	2601-2642120	STABILIZING CROP SEEDING & FERTILIZING (URBAN)	ACRE		3.860
	2416-8325040	T-SECT, CONC PIPE, 15"	EACH		1.000
	2528-8445114	PILOT CARSPILOT CAR	DAY		5.000
	2599-9999005	('EACH' ITEM)CELL PHONE	EACH		387.270
	2502-8212210	SUBDRAIN, PERFORATED PLASTIC PIPE, 10"~	LF		594.000
	2599-9999009	('LINEAR FEET' ITEM)PRICE ADJUST CURB/GUTTER	LF		-1.000
	2102-4560000	LOCATING TILE LINES	STA		550.000
	2599-9999005	('EACH' ITEM)STORM SEWER RELOCATION	EACH		3,419.770
	2599-9999005	('EACH' ITEM)SIDE STREET SAWCUT	EACH		548.300
	2599-9999018	('SQUARE YARDS' ITEM)COLD WEATHER PROTECTION	SY		1,461.450
	6200-1	""""""""""""""""""""""""""Price Adj. -See proj. file			-2,448.350
	2599-9999005	('EACH' ITEM)Smoothness Incentive	EACH		14,750.000

REFERENCE INFORMATION

100-4A
03-29-94

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2303-3400000	Adjustment of Fixtures. A. See Tabulation 104-10, Sheet C.06, for more information.
2315-8275025	Surfacing, Driveway, Class A, Crushed Stone. A. See Tabulation 102-3, Sheet C.07, for more information. B. Includes 200 tons for temporary surfacing during construction.
2402-0425031	Granular Backfill. A. See Tabulation CASING and 100-21M sheet C.05 and C.08 B. See Tabulations 104-5A and 104-5B, Sheets M.01 and M.02, for information.
2402-2720100 2416-0100036 2416-0150060 2416-1180036 2416-1180060	Excavation, Class 20, for Roadway Pipe Culvert. Aprons, Concrete, 36 in. Dia. Aprons, Concrete, Remove and Reinstall, 60 in. Dia. Culvert, Concrete Roadway Pipe, 36 in. Dia. Culvert, Concrete Roadway Pipe, 60 in. Dia. A. See Tabulation 104-3, Sheet C.05, and Sheet D.01 for information.
2416-0100015 2416-0100018 2416-0100024 2416-4005015 2416-4005018 2416-4005024 2416-8325040 2416-8325080 2417-0225015 2417-1060015 2417-2550015 2503-3220070 2503-4450030 2503-4450050 2503-4450060 2503-4450080 2503-4450350 2503-7275015 2503-7275018 2503-7275024 2503-7325015 2503-7325018 2503-7325024 2503-7326015 2503-7326018 2503-7326024 2503-8460010 2503-8460011 2503-8460020	Aprons, Concrete, 15 in. Dia. Aprons, Concrete, 18 in. Dia. Aprons, Concrete, 24 in. Dia. Guard, Pipe Apron, 15 in. Guard, Pipe Apron, 18 in. Guard, Pipe Apron, 24 in. Tee Section, Concrete Pipe, 15 in. on 15 in. Tee Section, Concrete Pipe, 18 in. on 18 in. Aprons, Metal, 15 in. Dia. Culvert, Corrugated Metal Roadway Pipe, 15 in. Dia. Elbows, Corrugated Metal Pipe, 15 in. Dia. Extension Unit, RA-7. Intake, RA-3. Intake, RA-5. Intake, RA-6. Intake, RA-8. Intake, RA-35. Sewer, 1500D Storm, 15 in. Dia. Sewer, 1500D Storm, 18 in. Dia. Sewer, 1500D Storm, 24 in. Dia. Sewer, 2000D Storm, 15 in. Dia. Sewer, 2000D Storm, 18 in. Dia. Sewer, 2000D Storm, 24 in. Dia. Sewer, 2000D Jacked Storm, 15 in. Dia. Sewer, 2000D Jacked Storm, 18 in. Dia. Sewer, 2000D Jacked Storm, 24 in. Dia. Utility Access, RA-1. Utility Access, RA-1, Modified. Utility Access, RA-2. A. See Tabulations 104-5A and 104-5B on Sheets M.01 and M.02 for details. B. See Sheets M.03 to M.22 and D.01 to D.05 for layout and pipe profiles. C. The corrugated metal pipe elbows are to be 7.5°. D. Intake numbers 5, 6, 10, and 11 are to have temporary inserts placed 3" low to ensure drainage during construction. See Sheets D.03, M.01, and M.02 for more information.
2422-0360024 2422-0360036 2422-1722024 2422-1722036	Aprons, Unclassified, 24 in. Dia. Aprons, Unclassified, 36 in. Dia. Culvert, Unclassified Entrance Pipe, 24 in. Dia. Culvert, Unclassified Entrance Pipe, 36 in. Dia. A. See Tabulation 102-3, Sheet C.07 for information.
2502-6745952 2502-8212034 2502-8220196 2502-8220206	Removal of Subdrain Subdrain, Longitudinal (shoulder), 4 in. Dia. Subdrain Outlet, RF-19E. Subdrain Outlet, Corrugated Metal Pipe, 6" A. See Tabulation 104-9 on Sheets C.08 and C.09 for details.
2502-8215812 2503-4450166	Subdrain, Tile, 12 in. Dia. Intake, RA-16C. A. See Tabulation 104-5D, Sheet C.06 for location and details. B. New Longitudinal Subdrains to be Installed Under or Adjacent to Widening Unit Prior to Paving of Paved Shoulders.

REFERENCE INFORMATION

100-4A
03-29-94

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2505-4020170 2505-4020250 2505-4020251 2505-4020400 2505-4021690	Guardrail, End Anchorage, Beam, RE-70. Guardrail, Formed Steel Beam. Guardrail, Formed Steel Thrie Beam. Guardrail, Posts, Beam. Guardrail, End Anchorage, Beam, RE-69. A. See Tabulation 108-8A, Sheet C.06 for details. B. See Sheet U.01 for layout information.
2505-6745740 2505-6745749 2505-6745855	Removal of Guardrail End Anchorage Removal of Guardrail Removal of Posts
2506-4984000	Flowable Mortar A. See Tabulation 110-9, Sheet C.06,
2510-6745850	Removal of Old Pavement. B. Includes 1451 Lin. Ft. of Full Depth Saw Cut which is incidental to this bid item. C. Includes 8540 Tons of AC Concrete/PC Concrete with an estimated thickness of 16.8", 227 tons of A.C. Concrete Parking Lot estimated thickness of 6", and 1695 tons of side street pavement with an estimated thickness of 10" that can be recycled into special backfill. D. A weight of 125 lbs/cu. ft. was used to obtain the above tonages.
2511-6745900	Removal of Sidewalk. B. Includes 4 Lin. Ft. of saw cut which is incidental to this bid item.
2511-7526004	Sidewalk, P.C. Concrete, 4 in. A. See Typical 6105, Sheet B.03, and Tabulation 112-4, Sheet C.05, for information. B. Includes quantity for Pedestrian Ramps.
2512-1725256	Curb and Gutter, P.C. Concrete, 2.5 Ft. A. See Typical 6131 Modified and 6129M on Sheet B.03, for details. B. This quantity includes 215' of 13.5" thick curb and gutter unit for north side of the 3rd. Ave. N. and U.S. 169 intersection. C. The specified thickness for 1240' of curb and gutter unit will be 8 in. for typical 6131 Modified.
2512-1725306	Curb and Gutter, P.C. Concrete, 3.0 Ft. A. See Typicals 6130 and 6130 Modified on Sheets B.03 and B.05 for details. B. This quantity includes 9595 Lin. Ft. of 13.5" thick and 669 Lin. Ft. of 8" thick curb and gutter sections. C. See Typical 7128M, Sheet B.04, for location of 7.5" curb & gutter unit.
2515-2475006	Drives, P.C. Concrete, 6 in. A. See Tabulation 102-3, Sheet C.0 , for information.
2515-6745600	Removal of Drives B. Includes an estimated 482 Lin. Ft. of saw cut which is incidental to this bid item.
	Safety Closure. A. See Tabulation
2523-0960400 2523-8925945	Conduit, Rigid Steel, 4 in. Dia. Handhole, RM-17, as per plan. A. placed at the intersection of 4th Ave. S.W. and U.S. 169. B. See Tabulation 108-2A, Sheet C.06, for information.
2524-9220030	Object Marker, Type 3. A. See Tabulation 108-17, Sheet C.05.

REFERENCE INFORMATION

100-4A
03-29-94

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2526-8285000	Construction Survey. A. This item will include obtaining the existing pavement elevations (widening section). A smooth profile grade line will then be designed based on these elevations in order to provide the required pavement cross section as detailed in the contract documents.
2527-9263110	Painted Pavement Marking A. See Tabulation 108-22 on Sheet B.06
2527-9263140	Pavement Symbols and Legend A. See Tabulation 108-29 on Sheet B.06 for locations.
	Traffic Control.
2599-9999005	Extend Subdrain Outlet, RF-19E A. See tabulation 104-9, sheet C.08 Existing CMP and block to be reused. B. The engineer will measure by count the number of extensions and for each extension counted the Contractor will be paid the contract unit price.
2599-9999009 2599-9999009 2599-9999009	10" Casing, Bore and Jack 14" Casing, Bore and Jack 12" Casing A. The engineer will measure the length to the nearest foot of casing placed. The Conctractor will then be payed the contract price per foot. B. See tabulation CASING, sheet C.05 for information.
2601-2632110	Fertilizer: Rate--450 lbs. of 13-13-13 or equivalent chemically combined commercial fertilizer per acre.
2601-2634100	Areas disturbed but not seeded with stabilizing crop by September 30 shall be scarified to a 3 in. depth, fertilized and mulched. All mulch to be consolidated into the soil with the mulch stabilizer. Mulch: Rate--1 1/2 tons of dry cereal straw per acre.
2601-2642100	Stabilizing Crop Seeding and Fertilizing Included for all rural areas of the right of way as designated by the Engineer. Seed Mixture: (Rural) Spring--March 1 to May 20 Oats — 2 bu. per acre Annual Ryegrass — 25 lbs. per acre Red Clover — 5 lbs. per acre Timothy — 5 lbs. per acre Summer--May 21 to July 20 Oats — 3 bu. per acre Annual Ryegrass — 35 lbs. per acre Red Clover — 5 lbs. per acre Timothy — 5 lbs. per acre Fall--July 21 to September 30 Oats — 2 bu. per acre Annual Ryegrass — 25 lbs. per acre Red Clover — 5 lbs. per acre Timothy — 5 lbs. per acre Fertilizer: Rate--450 lbs. of 13-13-13 or equivalent chemically combined commercial fertilizer per acre.

INFORMATION

100-4A
03-29-94

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2601-2642120	Stabilizing Crop Seeding and Fertilizing (Urban) Included for all urban areas of the right of way as designated by the Engineer. Seed Mixture (Urban) Spring--March 1 to May 20 Annual Ryegrass — 25 lbs. per acre Bluegrass, Ky (Park) — 15 lbs. per acre Perennial Ryegrass — 15 lbs. per acre Summer--May 21 to July 20 Annual Ryegrass — 45 lbs. per acre Bluegrass, Ky (Park) — 15 lbs. per acre Perennial Ryegrass — 15 lbs. per acre Fall--July 21 to September 30 Annual Ryegrass — 25 lbs. per acre Bluegrass, Ky (Park) — 15 lbs. per acre Perennial Ryegrass — 15 lbs. per acre Fertilizer: Rate--450 lbs. of 13-13-13 or equivalent chemically combined commercial fertilizer per acre.

10-22-93 201-1

Lighting Contractor shall check for locations of utilities, drainage structures or other facilities in the construction area. Any damage to such facilities due to the contractor's carelessness shall be corrected at the contractor's expense.

01-20-84 203-1

Plan and profile sheets included in the project are for the purpose of alignment, location and specific directions for the work to be performed under this contract. Irrelevant data on these sheets is not to be considered a part of this contract.

06-22-84 203-2

During construction of this project, the contractor will be required to coordinate his operations with those of other contractors working within the same area. Other work in progress during the same period of the time will include construction of the following projects:

Designer to List Projects

BRF-169-7(27)--38-46	
CITY WATER CONTRACTOR	
CITY BIKE TRAIL CONTRACTOR	

The contractor shall submit to the engineer a schedule for performance of work items, the completion of which is dependent on completion of prior work by other contractors, at the time work begins. This schedule will be coordinated with the schedules of others by the engineer to obtain a schedule that is mutually acceptable. The contractor shall then perform the work as to conform to the accepted schedule.

09-29-92 203-4

The contractor is encouraged to take full advantage of specification 1105.15 - Value Engineering Incentive Proposal. A pamphlet and conceptual proposal form will be available at the preconstruction conference.

01-20-84 204-2

All holes resulting from operations of the contractor, including removal of guardrail posts, fence posts, utility poles, or foundation studies, shall be filled and consolidated to finished grade as directed by the engineer to prevent future settlement. The voids shall be filled as soon as practical - preferably the day created and not later than the following day. Any portion of the right-of-way or project limits (including borrow areas and operation sites) disturbed by any such operations shall be restored to an acceptable condition. This operation shall be considered incidental to other bid items in project.

10-22-93 204-4

All guardrail materials that are removed and not reused on this project shall become the property of the contractor. Any material to be used on this project that is damaged due to the carelessness of the contractor shall be replaced at the contractor's expense without cost to the State of Iowa.

04-04-89 213-1

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the engineer.

06-22-84 213-3

All borrow areas, stockpile areas, haul roads and areas used for equipment on this project will require subsoil tillage to an average depth of 16 inches to 20 inches prior to placement of topsoil and/or stabilizing crop seeding. Such tillage shall be accomplished on maximum of three foot centers and at right angles to the finished slope of the borrow.

Equipment used to accomplish the tillage shall be equipped with an arrowhead-type shoe so as to provide lateral displacement and limit the movement of the subsoil to the surface. It shall be approved by the engineer for the use intended. This work will be considered incidental to other work on the project and no payment will be allowed.

It is intended that following subsoil tillage, the area remains in a "loosened" condition. Additional compaction or the operation of heavy equipment, other than required for topsoil placement and shaping shall not be allowed on areas which have received subsoil tillage.

06-22-84 213-4

The contractor shall apply necessary moisture to the construction area and haul roads to prevent the spread of dust. Refer to Article 1107.07 or the current Standard Specifications for additional details.

07-16-91 213-6

The backfilling and associated embankment construction shall be completed within 14 working days after the curing period has expired for culvert extension.

The immediate embankment shall be placed to provide 8:1 slopes away from the culvert top.

09-27-94 213-7

Unless otherwise directed or authorized, all asphaltic cement concrete and other bituminous materials which are not specifically addressed or described in the plans shall become the property of the contractor.

The contractor, in accordance with current rules and regulations of the Iowa Department of Natural Resources, may:

1. With the approval of the Engineer, blend or otherwise process the material for use with shoulder or special backfill aggregate, for use on the project.
2. With the approval of the Engineer, place with material in areas designated by the Engineer as Soil Aggregate Subbase without extra charge.
3. Remove the material from the project and stockpile for the contractor's future use.

01-20-84 221-3

Estimated quantity for new concrete pavement includes all integral curb, all street returns and special areas of repairs to connecting pavements.

01-20-84 221-4

In order to avoid any unnecessary surface breaks or premature spalling, the contractor is cautioned to exercise extreme care when performing any of the necessary saw cutting operations for the proposed pavement removal.

12-08-95 222-1

Special care shall be taken when forming at intersections so that the profiles and elevations shown on the cross sections, street return profile sheets, and staking diagram sheets are obtained. Short lengths of forms or flexible forms may be necessary at these locations.

01-20-84 223-2

Construction of fillets at non-paved entrances will be required on this project. Material for these fillets is included in the appropriate items of the "Estimate of Quantities". The Engineer may increase or decrease the number of fillets required.

01-20-84 223-4

The contractor shall reconstruct the existing shoulders on the project prior to commencing the resurfacing operation. The shoulders shall be constructed to the section shown on the plans. After the final course of resurfacing has been laid, a layer of granular material meeting current Standard Specifications shall be placed at a uniform thickness equal to the resurfacing for the full width of the shoulder.

05-10-88 223-5

After the completion of each day's resurfacing, a fillet or full width of granular shoulder material meeting current Standard Specifications shall be placed adjacent to and equal in thickness to the resurfacing prior to suspending construction activities for that day. If a fillet is placed, the minimum width of the fillet shall be one foot of width for each nominal inch of total A.C.C. resurfacing completed. The Engineer may modify this requirement in areas of narrow shoulders.

01-20-84 223-6

The Contractor is required to exercise care in shaping and compacting the resurfacing in the area of inlets to storm sewer intakes. The resurfacing course shall be shaped as necessary to insure maximum drainage into the intakes.

09-27-94 223-12

The surface course shall be a ¾" mix. At least 95% of the aggregate retained on the No. 4 sieve shall be Type 4 or better frictional classification aggregate and at least 50% retained on the No. 4 sieve shall be Type 3 or better frictional classification aggregate. If Type 2 is used in lieu of Type 3, the minimum shall be 35%. Frictional classification shall be in accord with Materials Instructional Memorandum T-203.

	The percentage of crushed particles shall be:	Marshall compaction requirements:
Surface	75 %	50 Blow
Binder	75 %	50 Blow
Base (including widening)	45 %	50 Blow

03-26-96 223-18

The current Specification for Quality Management - Asphalt (QM-A) shall apply to this project.

01-20-84 232-2

Erosion control quantities indicated hereon include all necessary items for seeding borrow areas.

01-20-84 232-5

The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service area(s) will be subject to the approval of the resident engineer.

06-07-94 232-8

The top six (6) inches of the disturbed areas shall be free of rock and debris and shall be suitable for the establishment of vegetation, subject to the approval of the Engineer.

01-20-84 241-1

Road contractor is to use due caution in working over and around all tile lines. Breaks in the tile line due to the contractor's carelessness are to be replaced at his expense without cost to the State of Iowa. Any tile lines broken or disturbed by our cut lines will be replaced as directed by the engineer in charge of construction and at the State of Iowa's expense.

01-20-84 241-3

Removal of old intakes, other street items necessitating removal, and blocking abandoned sewers and drainage pipes in order to clear the new work shall be considered as incidental work. The cost of such removal, disposal and blocking of abandoned sewers and drainage pipes shall be considered to be included in the contract price for other items.

01-19-88 251-1

The contractor shall be responsible to maintain access to individual properties during construction.

Relocated access shall be completed to individual properties prior to removal of existing access.

If the permanent access cannot be completed prior to removal of the existing access, the contractor shall provide and maintain an alternate access. Temporary Granular Surfacing will be paid for as a contract item or by extra work.

06-22-84 251-2

The contractor is hereby notified that removal of any existing traffic markers, warning devices or guardrail barriers shall be scheduled subject to the approval of the Engineer. The contractor may be required to place temporary warning devices at certain locations where replacement features are not installed the same day during which any such removals take place.

06-22-84 251-3

A plan for stage construction of local accesses which are required to remain open to traffic during construction shall be submitted by the contractor for approval by the engineer.

05-10-88 251-5

On all new or reconstructed pavements, the location of "NO PASSING" zone lines shall be located in the field. The locations of the proposed "NO PASSING" zone lines shown on the pavement marking tabulation is for estimating quantities only.

01-20-84 261-2

Before performing earthwork, tiling, or excavation within three hundred feet of an existing pipeline, the contractor shall notify the pipeline company and the pipeline company shall mark the location of the pipeline as required by Section 479.47 of the Code of Iowa.

The contractor shall exercise all due caution when working in the vicinity of pipelines carrying combustible or toxic materials which are present on this project. Pipeline location shown on the plans represents the best information available at the time of plan preparation.

08-12-96 DETOUR-1

14th Ave. S.W. will be staged in order to maintain traffic at all times. Staging details must be submitted to and approved by the Resident Construction Engineer.

08-12-96 SOIL-1

The cross sections were originally drawn for an 8" P.C.C. concrete base and a 9.5" P.C.C. pavement. The tabulation of template quantities (sheets T.01 to T.05) do not reflect the correct thickness for the 14" A.C.C. pavement. Therefore, a correction for cut and fill was added to the plan and profile sheet balances in order to account for the greater A.C.C. thickness.

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

104-3
03-26-96

* Not a bid item

LOCATION	TYPE	SIZE Inches	KIND OF PIPE	LENGTH NEW CONST. Lin. Ft.	BEDDING CLASS	DESIGN COVER (H)	CAMBER Ft.	EST. SETTLE-MENT Inches	APRON NO. Inlet	APRON NO. Outlet	ADAPTORS * RF-2 Type	ADAPTORS * RF-2 No.	CONNECT PIPE JOINT * RF-14 Type	CONNECT PIPE JOINT * RF-14 No.	FLOW LINE ELEVATIONS Lt.	FLOW LINE ELEVATIONS Rt.	FLOW LINE ELEVATIONS Other	DIMENSIONS Lin. Ft. Total Lt.	DIMENSIONS Total Rt.	DIMENSIONS Extensions Lt.	DIMENSIONS Extensions Rt.	SKEW AHEAD Degrees Lt.	SKEW AHEAD Degrees Rt.	DIKE Rt. / Lt.	DIKE Location Station	DIKE Top Elevation	DIKE Type	CLASS 20 Cu. Yds.	EMBANK-MENT IN PLACE Cu. Yds.	REMARKS
225+50	1101	60	RCP	52	C	6.7			*	*	C-1	2	3	6	1109.5	1099.0		79	117	28	24	30						36		* Remove and relay aprons, 1 degree bevel on extensions (each end).
2227+05	1101	36	RCP	144	C	5.7			1	1			3	6	1109.8	1099.0		48	106				15					207		

TABULATION OF DELINEATORS AND OBJECT MARKERS

108-17
04-28-92

Refer to Standard Plan RE-48A-B* and RE-29C ** Not a Bid Item

LOCATION Station	LOCATION Type*	DELINEATOR Single White D-1W Number	OBJECT MARKER Type 2 OM2-3YV Number	OBJECT MARKER Type 3 OM-3L Number	OBJECT MARKER Type 3 OM-3R Number	OBJECT MARKER Offset Brackets ** Number	REMARKS
280+22	3			1	1	2	
283+58	3			1	1	2	

TABULATION OF RESURFACING RUNOUTS

106-3
08-30-88

LOCATION MILEPOST From	LOCATION MILEPOST To	LOCATION STATION From	LOCATION STATION To	TYPE	LENGTH Lin. Ft.	REMARKS
		214+55	215+30	A Binder	75	
		214+55	215+30	A Surface	75	

TABULATION OF PEDESTRIAN CURB RAMPS

112-4
09-23-86

LOCATION	SIDE	TYPE	W
261+10	L	B	6
261+10	R	B	6
3262+15	L	B	5
3262+15	R	B	6
289+87	R	B	4

PCC quantities are included in the sidewalk tabulation.

HYDRAULIC DESIGN

REGISTERED PROFESSIONAL ENGINEER
BRADLEY C. BARRETT
11108
IOWA

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly Registered Professional Engineers under the laws of the State of Iowa.

Name: Bradley C. Barrett
Iowa Registration No. 11108 Date 10/9/96

TABULATION OF UTILITIES

102-13
02-23-93

WATER
City of Humboldt
Water Dept.
1000 Sumner Ave. SW
Humboldt, IA. 50548
515-332-2667

SEWER
City of Humboldt
Sanitation Dept.
1400 Taft St. S.
Humboldt, IA. 50548
515-332-3723

GAS & ELECTRIC
Mid-American Energy
1608 1st Ave. S.
Ft. Dodge, IA. 50501
515-573-3111

TELEPHONE
U.S. WEST
1-800-292-8989

IOWA ONE-CALL 1-800-292-8989

STANDARD ROAD PLANS

105-4
06-17-77

The following Standard Road Plans shall be considered applicable to construction work on this project.

NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
RA-1	02-23-93	RE-12B	12-03-96	RG-6	10-02-90
RA-2	02-23-93	RE-47	11-10-87	RH-50	08-20-96
RA-3	07-16-91	RE-48A	12-08-95	RH-51	08-20-96
RA-5	01-07-92	RE-65	10-31-95	RH-52	08-20-96
RA-6	07-16-91	RE-68	12-03-96	RJ-26D	07-16-91
RA-7	12-03-96	RE-69	12-03-96	RJ-33	09-27-94
RA-8(1)	08-08-89	RE-70(1)	12-03-96	RK-19A	09-29-92
RA-8(2)	08-08-89	RE-70(2)	12-03-96	RK-19D	11-10-92
RA-8(3)	02-17-87	RE-70(3)	12-03-96	RL-1B	12-03-96
RA-13A	01-19-88	RF-1	09-03-76	RL-2A	12-03-96
RA-16C	02-28-89	RF-2	02-23-93	RL-7	12-13-94
RA-25	01-19-88	RF-3	11-10-92	RL-9	12-09-77
RA-26	01-19-88	RF-5	03-28-95	RL-14	03-26-96
RA-27	01-19-88	RF-14	04-28-92	RM-17	05-18-73
RA-35	07-13-73	RF-19C	04-28-92	RS-2	04-30-96
RA-38	06-14-74	RF-19E	03-28-95	RS-3	12-03-96
RB-3	12-03-96	RF-21	11-22-74	RS-4	12-03-96
RB-6	12-03-96	RF-26	02-17-87	RS-12	04-30-96
RC-16	04-28-92	RF-30A	03-28-95	RS-13	04-30-96
RE-2A	10-31-95	RF-30B	03-28-95	RS-17A	08-20-96
RE-2B	10-22-93	RF-31	03-28-95	RS-26A	08-20-96
RE-7	08-20-96	RF-32	03-28-95	RS-26B	08-20-96
RE-12A	12-03-96	RF-33	03-28-95	RS-62	04-30-96
		RG-2	10-02-90	RS-73	04-30-96

LIST OF WATERMAIN CASING PIPE

CASING

STATION TO STATION		WALL THICKNESS In.	CASING DIA. In.	LENGTH OF CASING Ft.	SLOPE	ELEVATION Lt	ELEVATION Rt	LOCATION Lt	LOCATION Rt	GRANULAR BACKFILL Tons	REMARKS
237+00 (Rt)	237+00 (Lt)	3/16"	14"	108	2.90%	1124.53	1127.66	55'	53'		Bore and Jack
261+32 (Lt)	261+94 (Lt)	3/16"	10"	62		1137.05	1137.05	46'			Bore and Jack
265+55 (Rt)	265+55 (Lt)	3/16"	12"	95	4.54%	1133.95	1138.27	45'	50'	78.1 (C)	
274+14 (Lt)	274+44 (Lt)	3/16"	12"	30		1126.45	1126.45	47'		62.6 (C)	
275+37 (Rt)	275+37 (Lt)	3/16"	12"	95		1123.85	1123.85	45'	50'	92.97 (C)	
269+31 (LT)	269+31 (LT)	3/16"	12"	40						45.97	

(A) All casings shall be steel
(B) Casings shall be field varified: @ 4th Ave SW (existingvalve manhole)
@ 3rd Ave SW (existing 4" watermain)
@ Oak Blvd (existing 4" watermain @ valve manhole north of centerline)
@ Hickory Lane (existing 6" watermain north of centerline)
(C) See typical HD-9 on sheet M.04.

LIST OF INTAKES ①

104-5D
03-28-95

NUMBER	LOCATION	TYPE OR STANDARD ROAD PLAN	FORM GRADE Elev.	BOTTOM WELL Elev.	NOTE
1	3258+61 42.0' Rt.	RA-16C	41.1	37.1	4th Ave. SW

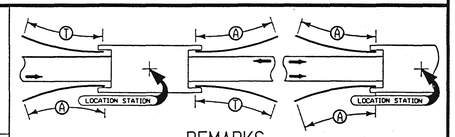
① Connect to Existing 12" Tile.

TABULATION OF STEEL BEAM GUARDRAIL FOR STANDARD ROAD PLANS RE-63, RE-65

108-8A
03-26-96

① Includes 2 - 12.5' Thrie Beam Sections and 1 - 6.25' "W" to Thrie Beam Transition Section
② Not a bid item

LOCATION NO.	LOCATION STATION	STANDARD ROAD PLAN	CASE	FORMED STEEL BEAM GUARDRAIL (A) "W" Beam	(A) STS ① Thrie Beam 31.25'	(H) Thrie Beam	(T) STS ① Thrie Beam 31.25'	(T) "W" Beam	TOTAL "W" BEAM	TOTAL THRIE BEAM	BEAM GUARDRAIL POSTS With 8"x 8" Spacer Blocks 10"x10"x6'	8"x8"x6'	CRT 6"x8"x6'	Terminal ② 5½"x7½"x3'-6½"	POST & ADAPTOR RE-37	ANCHOR SYSTEM Type	No.	REMARKS
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	No.	No.	No. (4)	No. (2)	No.			
1	281+90.02	(A)	U	37.5				37.5	75		3		8	4		RE-70	2	See Sheet U.01
					31.25		31.25			62.5	3	8				RE-69	2	
2	281+90.02	(A)	U	37.5				37.5	75		3		8	4		RE-70	2	See Sheet U.01
					31.25		31.25			62.5	3	8				RE-69	2	



TABULATION OF BRIDGE APPROACH SECTION

(Refer to Standard Road Plan RF-19D, RF-19E, RK-16, RK-19A, RK-19B, RK-19C, RK-19D, RK-19E, RK-19F, RK-19G, RK-19H, or RK-19J)

① Not a bid item

112-6
06-07-94

LOCATION Bridge Station	End	APPROACH PAVEMENT Case	(PN) for Case '2'	(T) Thickness Inches	Non-Reinf. Pavement Area Sq. Yds.	Reinforced Pavement Area Sq. Yds.	Fixed or Movable Abutment F or M	SUBDRAIN Perforated Subdrain ① 4" Lin. Ft.	Subdrain Outlet ① Station	Side	Porous ① Backfill Cu. Yds.	Class 'A' Crushed Stone ① Backfill Cu. Yds.	APPROACH SUBGRADE Special Backfill ① Tons	Engineering Fabric ① Sq. Yds.	REMARKS
281+90.02	S	(A)		10	540.0	130.4	M						598	669	A, B, C
281+90.02	N	(A)		10	540.0	130.4	M						598	669	A, B, C

(A) See Sheet U.01
(B) Special Backfill and Engineering Fabric were determined using a total width of 62.66' for the reinforced section and 58' for the non-reinforced section
(C) See Sheet L.10 for more details

LISTING OF LIGHTING AND SIGNAL WORK

108-2A
05-10-88

HANDHOLES

NO.	STATION	TYPE
1	261+20, 44' L	2
2	261+89, 42' L	2
3	262+01, 34' R	2
4	261+19, 34' R	2

CONDUITS

LINE NO.	LOCATION FROM	TO	CONDUIT TYPE	DIA. INCHES	LENGTH	NOTES
L-1	1	2	(A)	4	72'	
L-2	2	3	(A)	4	77'	
L-3	3	4	(A)	4	86'	

(A) Rigid Steel

TABULATION OF CULVERT ABANDONMENT

110-9
04-04-89

LOCATION STATION	DESCRIPTION	FILL MATERIAL Type	Cu. Yds.	REMARKS
2226+75	36" x 82' Conc. Pipe	Flow. Mortar	28 (C)	(A) Sh. D.01
2226+75	36" x 42' Conc. Pipe	Flow. Mortar	9 (C)	Sh. D.01
226+15.7	24" x 118' Storm Sewer	Flow. Mortar	5 (C)	(A) (B) Sh. D.01
2226+75	18" x 55' Storm Sewer	Flow. Mortar	4 (C)	Sh. D.01
245+60.8	2' x 2' x 38.9' RCB	Flow. Mortar	11 (C)	Sh. D.03
255+07.5	24" x 57' Conc. Pipe		7	(D) Sh. D.03
275+46 - 25.2' R	15" Storm Sewer			(D) Sh. D.05
276+12.5	24" x 49' Conc. Pipe			(D) Sh. D.05

(A) Injection hole drilling is required for any structure longer than 60'.
(B) The pipe is surrounded by flowable mortar and is inside of a 3.0' x 3.5' x 68.2' RCB.

Plug and abandon.

ADJUSTMENT OF FIXTURES

104-10
04-18-80

NO.	LOCATION STATION	TYPE OF FIXTURE	ADJUSTMENT
1	224+13 48' Lt.	2" Gas Valve	Not a Bid Item (A)
2	246+06 29' Lt.	22" San. Sewer M.H.	2.1' (A)
3	248+45 49' Lt.	22" Manhole	Not a Bid Item (A)
4	248+58 29' Lt.	22" San. Sewer M.H.	2.5' (A)
5	250+13 31' Lt.	22" San. Sewer M.H.	4.0' (A)
6	250+28 30' Lt.	22" Manhole	Not a Bid Item (A)
7	253+12 37' Lt.	22" Manhole	4.8' (A)
8	257+53 45' Lt.	24" San. Sewer M.H.	1.8' (A)
9	261+14 37' Lt.	22" Manhole	Not a Bid Item (A)
10	261+27 47' Lt.	22" Manhole	Not a Bid Item (A)
11	261+27 55' Rt.	8" Water Valve	Not a Bid Item (A)
12	261+73 30' Rt.	22" San. Sewer M.H.	0.2'
13	263+60 49' Lt.	4" Water Valve	Not a Bid Item
14	269+03 33' Lt.	22" San. Sewer M.H.	1.1' (A)
15	270+62 32' Lt.	22" San. Sewer M.H.	Not a Bid Item (A)
16	270+98 50' Lt.	4" Water Valve	Not a Bid Item (A)
17	274+35 40' Lt.	26" San. Sewer M.H.	-1.4'
18	274+40 58' Lt.	18" Manhole	-0.4'
19	275+22 LT.		
20	290+25 RT.		
21	269+31 34' LT.		

(A) OUTSIDE PAVEMENT

① Refer to RB-3
② Refer to RL-7

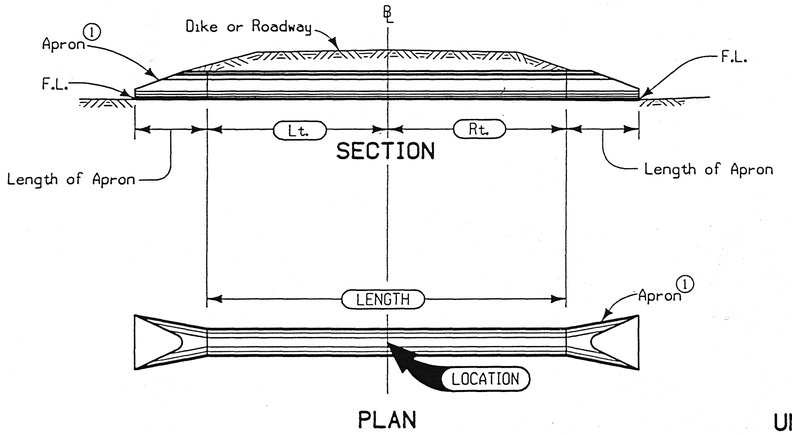
POINTS OF ACCESS

102-3
03-26-96

Refer to Cross Sections

LOCATION			LENGTH OF OPENING ①				① ②	PIPE CULVERT (RF-30A or RF-30B)						DRIVEWAY SURFACE AREA			
									Size								
Station	Side	Type (A,B, or C)	Case (1,2, or 3)	1½" Dropped Curb Lineal Feet	3" Dropped Curb Lineal Feet	(W)	(PR)	(H)	18" Lin.Ft.	24" Lin.Ft.	36" Lin.Ft.	Lin. Ft.	Aprons No.	A.C.C. Sq. Yds.	P.C.C. Sq. Yds.	DRIVEWAY SURFACING MATERIAL Tons	REMARKS
216+06	R	C				24										10	
222+00	L	C				24										6	
224+51	L	B	3	45		39								25	44.44		
226+13.2	R	A				61										1575	14th Ave SW (A)
228+29	L	C				24		1.4'			39		2			12	Unclassified ent. pipe
234+75	R	C	3	24		15									21.94	2	
230+50	L	C				24		1'		31			2			12	Unclassified ent. pipe
248+26	L	JT-B	3	45		43									45.0	7	
250+33	L	C	3	24		15									30.0	5	
251+44	L	C	3	24		15									23.67	4	
252+23	L	C	3	24		15									22.32	2	
253+26	L	B	3	45		45									55.53		
257+75	R	B	3	45		45								52	48.33		
259+24	R	B	3	35		35								37	37.22		
259+74	R	B	3	35		35								38	37.22		
3262+27	R	B	3	6		6								13			
3262+42	R	B	3	24		24								31	25.11		
262+73.5	R	B	3	35		35								54	37.22		
263+20	L	B	3		30	24									25.0	4	
271+60	L	C	3	24		15									23.78	5	
272+53	L	C	3	24		15									48.02		
276+49	L	C	Special	30		10									113.47		Flare Lt. - 5' Radius Rt.
286+30	L												2				104' Lt. (24" Unclassified)
287+05	R	B	3	35		32									36.0	15	
	(A) See Typical 2111M, sheet B.03 for details.																

1601
03-28-95



Notes:

℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

Skew angle is the angle which one end of the pipe is ahead (by stationing) of a line perpendicular to the ℄ (example skew Rt. ahead 30 degrees).

Refer to tabular listings and other plans for additional information.

The outer three joints are to be connected when the concrete option is used.

① See Standard Road Plan RF-3 for Concrete or RF-5 for Metal and Polyethylene.

UNCLASSIFIED PIPE CULVERT

SUBGRADE TREATMENT

(For Additional Details see Soils Survey Sheet No. 0.01 to 0.06 .)

103-3
06-07-94

NO.	LOCATION	DESCRIPTION			TYPE	QUANTITY		POLYMER GRID Sq. Yds.	AVAILABLE FROM		REMARKS
	Station to Station	Side	Depth	Width	Material + Shrink %	Cu. Yds.	Tons		Quantity	Station to Station	
1	215+90 to 256+60	Lt.	1.0'	Vari.	Special Backfill		4563				
2	220+30 to 256+60	Rt.	1.0'	Vari.	Special Backfill		4408				
3	256+60 to 279+22		1.0'	60'	Special Backfill		9571				
3-A	271+50 to 276+00		Vari.	58'	Loam F + 10%	1891			25968	Borrow	(A)
4	284+58 to 288+80.6		1.0'	60'	Special Backfill		1845				
4	288+80.6 to 290+50		1.0'	60-54'	Special Backfill		491				
	(A) This quantity includes two 2' deep transitions for 50'.										

GEOTECHNICAL DESIGN

REGISTERED PROFESSIONAL ENGINEER
ROBERT L. STANLEY
8468
IOWA

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly Registered Professional Engineers under the laws of the State of Iowa.

Name Robert Stanley
Iowa Registration No. 8468 Date 10-8-96

10

① Refer to Standard Road Plan RF-19C.
② Refer to Soils Sheets

TABULATION OF LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

104-9
09-29-92

*Not a bid item

LOCATION						LONGITUDINAL SUBDRAIN				CMP SUBDRAIN OUTLET RF-19E or RF-22			POROUS * BACKFILL	Class 'A' * Crushed Stone	REMARKS
					Depth (D)	Shoulder ①		Backslope ②							
Line No.	Road or Lane Ident.	Station	to Station	Side	Inch.	Size	Lin. Ft.	Size	Lin. Ft.	Station	Size	Type	Cu. Yds.	Cu. Yds.	
1	US 169	221+50	227+50	RT	42	4"	594			221+50	6"	E	54.8	0.5	
										227+50	6"	E		0.5	
2	US 169	227+50	232+50	RT	42	4"	527			227+50	6"	E	48.6	0.5	
										232+50	6"	E		0.5	
3	US 169	233+07	237+62	RT	42	4"	460			233+07	6"		49.5		OUTLET - STUB INTO INTAKE.
										237+62	6"				OUTLET - STUB INTO INTAKE.
4	US 169	237+62	242+09	RT	24	4"	456			237+62	6"		28.1		OUTLET - STUB INTO INTAKE.
										242+09	6"				OUTLET - STUB INTO INTAKE.
5	US 169	242+09	245+09	RT	24	4"	318			242+09	6"		19.6		OUTLET - STUB INTO INTAKE.
										245+09	6"				OUTLET - STUB INTO INTAKE.
6	US 169	245+09	247+65	RT	24	4"	265			245+09	6"		16.3		OUTLET - STUB INTO INTAKE.
										247+65	6"				OUTLET - STUB INTO INTAKE.
7	US 169	247+65	249+00	RT	24	4"	185			247+65	6"		11.4		OUTLET - STUB INTO INTAKE.
										251+00	6"				OUTLET - STUB INTO INTAKE.
8	US 169	249+00	256+60	RT	24	4"	760			251+00	6"		46.8		OUTLET - STUB INTO INTAKE.
										254+00	6"				OUTLET - STUB INTO INTAKE.
										254+00	6"				OUTLET - STUB INTO INTAKE.
										256+65	6"				OUTLET - STUB INTO INTAKE.
10	US 169	256+60	258+94	RT	24	4"	245			256+65	6"		15.1		OUTLET - STUB INTO INTAKE.
										258+94	6"				OUTLET - STUB INTO INTAKE.
11	US 169	258+94	262+15	RT	24	4"	331			258+94	6"		20.4		OUTLET - STUB INTO INTAKE.
										262+15	6"				OUTLET - STUB INTO INTAKE.
12	US 169	262+15	268+85	RT	24	4"	685			262+15	6"		42.2		OUTLET - STUB INTO INTAKE.
										268+85	6"				OUTLET - STUB INTO INTAKE.
13	US 169	268+85	271+93	RT	24	4"	330			268+85	6"		20.2		OUTLET - STUB INTO INTAKE.
										271+93	6"				OUTLET - STUB INTO INTAKE.
14	US 169	271+93	274+75	RT	24	4"	295			271+93	6"		18.2		OUTLET - STUB INTO INTAKE.
										274+75	6"				OUTLET - STUB INTO INTAKE.
15	US 169	274+75	277+37	RT	24	4"	272			274+75	6"		16.8		OUTLET - STUB INTO INTAKE.
										277+37	6"				OUTLET - STUB INTO INTAKE.
16	US 169	277+37	279+19	RT	24	4"	200			277+37	6"		12.3		OUTLET - STUB INTO INTAKE.
										279+19	6"				OUTLET - STUB INTO INTAKE.
17	US 169	284+67	286+75	RT	24	4"	228			284+67	6"		13.8		OUTLET - STUB INTO INTAKE.
										286+75	6"				OUTLET - STUB INTO INTAKE.
18	US 169	286+75	290+44	RT	24	4"	383			286+75	6"		23.6		OUTLET - STUB INTO INTAKE.
										290+44	6"				OUTLET - STUB INTO INTAKE.
19	US 169	220+00	225+50	LT	42	4"	585			220+00	6"	E	54.0	0.5	
										225+50	6"	E		0.5	
20	US 169	225+50	227+50	LT	42	4"	235			225+50	6"	E	21.7	0.5	
										227+50	6"	E		0.5	
21	US 169	227+50	232+00	LT	42	4"	479			227+50	6"	E	44.2	0.5	
										232+00	6"	E		0.5	
22	US 169	232+00	237+00	LT	42	4"	547			232+00	6"	E	50.5	0.5	
										237+00	6"	E		0.5	
23	US 169	237+00	242+00	LT	42	4"	537			237+00	6"	E	49.6	0.5	
										242+00	6"	E		0.5	
24	US 169	242+00	245+09	LT	42	4"	309			242+00	6"	E	28.5	0.5	
										245+09	6"				OUTLET - STUB INTO INTAKE.
25	US 169	245+09	247+65	LT	24	4"	270			245+09	6"		16.6		OUTLET - STUB INTO INTAKE.
										247+65	6"				OUTLET - STUB INTO INTAKE.
26	US 169	247+65	251+00	LT	24	4"	358			247+65	6"		22.1		OUTLET - STUB INTO INTAKE.
										251+00	6"				OUTLET - STUB INTO INTAKE.
27	US 169	251+00	254+00	LT	24	4"	317			251+00	6"		19.5		OUTLET - STUB INTO INTAKE.
										254+00	6"				OUTLET - STUB INTO INTAKE.
28	US 169	254+00	256+65	LT	24	4"	285			254+00	6"		17.6		OUTLET - STUB INTO INTAKE.
										256+65	6"				OUTLET - STUB INTO INTAKE.
29	US 169	256+65	258+94	LT	24	4"	239			256+65	6"		14.7		OUTLET - STUB INTO INTAKE.
										258+94	6"				OUTLET - STUB INTO INTAKE.
30	US 169	258+94	262+23	LT	24	4"	344			258+94	6"		21.2		OUTLET - STUB INTO INTAKE.
										262+23	6"				OUTLET - STUB INTO INTAKE.
31	US 169	262+23	268+83	LT	24	4"	670			262+23	6"		41.2		OUTLET - STUB INTO INTAKE.
										268+83	6"				OUTLET - STUB INTO INTAKE.
32	US 169	268+83	271+93	LT	24	4"	326			268+83	6"		20.1		OUTLET - STUB INTO INTAKE.
										271+93	6"				OUTLET - STUB INTO INTAKE.
33	US 169	271+93	273+89	LT	24	4"	200			271+93	6"		12.3		OUTLET - STUB INTO INTAKE.
										273+89	6"				OUTLET - STUB INTO INTAKE.
34	US 169	273+89	277+37	LT	24	4"	360			273+89	6"		22.2		OUTLET - STUB INTO INTAKE.
										277+37	6"				OUTLET - STUB INTO INTAKE.
35	US 169	277+37	279+19	LT	24	4"	195			277+37	6"		12.0		OUTLET - STUB INTO INTAKE.
										279+19	6"				OUTLET - STUB INTO INTAKE.
36	US 169	284+67	286+75	LT	24	4"	220			284+67	6"		13.6		OUTLET - STUB INTO INTAKE.

D1

① Refer to Standard Road Plan RF-19C.
② Refer to Soils Sheets

TABULATION OF LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

104-9
09-29-92

*Not a bid item

LOCATION						LONGITUDINAL SUBDRAIN				CMP SUBDRAIN OUTLET RF-19E or RF-22			POROUS * BACKFILL	Class 'A' * Crushed Stone	REMARKS
					Depth (D)	Shoulder ①		Backslope ②							
Line No.	Road or Lane Ident.	Station	to Station	Side	Inch.	Size	Lin. Ft.	Size	Lin. Ft.	Station	Size	Type	Cu. Yds.	Cu. Yds.	
										286+75	6"				OUTLET - STUB INTO INTAKE.
37	US 169	286+75	289+00	LT	24	4"	232			286+75	6"		14.3		OUTLET - STUB INTO INTAKE.
										289+00	6"				OUTLET - STUB INTO INTAKE.
38	US 169	289+00	290+44	LT	24	4"	154			289+00	6"		9.5		OUTLET - STUB INTO INTAKE.
										290+44	6"				OUTLET - STUB INTO INTAKE.
TOTALS							13441						963.1	7.5	
	NOTE:	LONGITUDINAL SUBDRAINS NOS. 1 - 3 AND 19 - 24 ARE TO BE TYPE 8 INSTALLATION.													
		OUTLETS FOR TYPE 8 SUBDRAINS ARE 19-E UNLESS OTHERWISE NOTED IN REMARKS COLUMN.													
	NOTE:	LONGITUDINAL SUBDRAINS NOS. 4 - 18 AND 25 - 38 ARE TO BE TYPE 12 INSTALLATION.													
1	US 169	226+00		LT	48					226+00			1.6	0.5	EXTEND OUTLET 19-E.
2	US 169	227+30		LT	48					227+30			1.6	0.5	EXTEND OUTLET 19-E.
3	US 169	245+50		LT	48					245+50			1.6	0.5	EXTEND OUTLET 19-E.
4	US 169	241+90		RT	48					241+90					OUTLET - STUB INTO INTAKE @ STA. 242+00.
5	US 169	245+00	245+50	LT	48	4"	50			248+50	6"		6.2		TAKE DRAIN BACK & STUB INTO INTAKE @ STA. 247
										255+00					
6	US 169	270+00	276+10	LT						276+10					SUBDRAIN TO BE REMOVED.
7	US 169	270+00	276+10	RT						276+10					SUBDRAIN TO BE REMOVED.
TOTALS														1.5	
	NOTE:	EXISTING DRAIN OUTLETS TO EXTEND OR CHANGE, AND SUBDRAINS TO BE REMOVED.													
	NOTE:	ALL EXISTING SUBDRAINS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION UNLESS STATED FOR REMOVAL.													

GEOTECHNICAL DESIGN

REGISTERED PROFESSIONAL ENGINEER
ROBERT L. STANLEY
8468
IOWA

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly Registered Professional Engineers under the laws of the State of Iowa.

Name Robert Stanley
Iowa Registration No. 8468 Date 11-8-96

PROJECT QUANTITIES (1)

100-1A
03-29-94

CONSTRUCTION USE ONLY	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
	2102-2710070	Excavation, Class 10, Roadway and Borrow	CY		152
	2303-0375010	Asphalt Cement Concrete	TON		19
	2303-0400175	Asphalt Cement Concrete, Type A Binder Course, ¾in. Mix	TON		33
	2303-0400475	Asphalt Cement Concrete, Type A Surface Course, ¾ in. Mix	TON		33
	2303-0525600	Base, Type B Class 1 Asphalt Cement Concrete	TON		255
	2502-8215812	Subdrain, Tile, 12 in. Dia.	LF		12
	2503-4450030	Intake, RA-3 (No. 48)	EA.		1
	2503-4450030	Intake, RA-3 (No. 49)	EA.		1
	2503-4450030	Intake, RA-3 (No. 52)	EA.		1
	2503-4450030	Intake, RA-3 (No. 53)	EA.		1
	2503-4450166	Intake, RA-16C	EA.		1
	2503-7275015	Sewer, 1500D Storm, 15" (P-53)	LF.		28
	2503-7325015	Sewer, 2000D Storm, 15" (P-48)	LF.		14
	2503-7325015	Sewer, 2000D Storm, 15" (P-49)	LF.		19
	2503-7325015	Sewer, 2000D Storm, 15" (P-52)	LF.		37
	2503-8460020	Utility Access, RA-2 (No. 50)	EA.		1
	2527-9263110	Painted Pavement Marking	STA.		15.34
	2527-9263140	Painted Symbols and Legend	EA.		3
	2599-9999009	10" Casing, Bore and Jack	LF.		62
	2599-9999009	14" Casing, Bore and Jack	LF.		108
	2599-9999009	12" Casing	LF.		260

REFERENCE INFORMATION

100-4
03-29-94

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2102-2710070	Excavation, Class 10, Roadway and Borrow A. Excavation for Wildcat Road. See sheets E.01 for information.
2303-0375010 2303-0400175 2303-0400475 2303-0525600 2502-8215812 2503-4450166	Asphalt Cement Concrete Asphalt Cement Concrete, Type A Binder Course, ¾in. Mix Asphalt Cement Concrete, Type A Surface Course, ¾ in. Mix Base, Type B Class 1 Asphalt Cement Concrete Subdrain, Tile, 12 in. Dia. Intake, RA-16C A. Quantities are for right turn lane on Wildcat road. See Sheet E.01 and Tabulation 108-29 on Sheet B.01 for details.
2503-4450030	Intake, RA-3 No's 48,49,52,53
2503-7275015	Sewer, 1500D Storm, 15" Line P-53 - 28 L.F.
2503-7325015	Sewer, 2000D Storm, 15" Line P-48 - 12 L.F. Line P-49 - 22 L.F. Line P-52 - 37 L.F.
2503-8460020	Utility Access, RA-2 No. 50
2527-9263110 2527-9263140	Painted Pavement Marking Painted Symbols and Legend A. Pavement markings for Wildcat Road. See sheet E.01 for details.
2599-9999009 2599-9999009 2599-9999009	10" Casing, Bore and Jack 14" Casing, Bore and Jack 12" Casing A. See Tabulation Casing, sheet C.05 for details.

The cost of storm sewer pipes, intakes, utility access, etc. 100% city.

(1) These quantities are included in the quantities on sheet C.01 and C.02.

FOR INFORMATION ONLY

CITY PARTICIPATION (HUMBOLDT)

PROJECT QUANTITIES (1)

100-1A
03-29-94

CONSTRUCTION USE ONLY	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
	2416-0100015	Apron, Concrete, 15" (Line P-2)	EA.		1
	2416-0100015	Apron, Concrete, 15" (Line P-14)	EA.		1
	2416-0100015	Apron, Concrete, 15" (Line P-47)	EA.		1
	2416-0100015	Apron, Concrete, 15" (Line P-38)	EA.		1
	2416-0100018	Apron, Concrete, 18" (Line P-58A)	EA.		1
	2416-0100018	Apron, Concrete, 18" (Line P-59)	EA.		1
	2416-0100024	Apron, Concrete, 24" (Line P-5A)	EA.		1
	2416-8325040	Tee Section, Concrete Pipe, 15" x 15" (Line P-21)	EA.		1
	2416-8325080	Tee Section, Concrete Pipe, 18" x 18" (Line P-58B)	EA.		1
	2416-4005015	RF-26 Pipe Apron Guard, 15" (Line P-14)	EA.		1
	2416-4005018	RF-26 Pipe Apron Guard, 18" (Line P-58A)	EA.		1
	2416-4005024	RF-26 Pipe Apron Guard, 24" (Line P-5A)	EA.		1
	2417-0225015	Aprons, Metal, 15 in. Dia. (Line P-32)	EA.		1
	2417-1060015	Culvert, Corrugated Metal Roadway Pipe, 15 in. Dia. (Line P-32)	LF.		70
	2417-1060015	Culvert, Corrugated Metal Roadway Pipe, 15 in. Dia. (Line P-32)	LF.		7
	2417-2550015	Elbows, Corrugated Metal Pipe, 15 in. Dia. (Line P-32)	EA.		2
	2503-4450030	Intake, RA-3 (No. 3)	EA.		1
	2503-4450030	Intake, RA-3 (No. 41)	EA.		1
	2503-4450030	Intake, RA-3 (No. 44)	EA.		1
	2503-4450030	Intake, RA-3 (No. 45)	EA.		1
	2503-4450050	Utility Access, RA-5 (No. 7)	EA.		1
	2503-4450350	Utility Access, RA-35 (No. 42)	EA.		1
	2503-4450350	Utility Access, RA-35 (No. 43)	EA.		1
	2503-4450350	Utility Access, RA-35 (No. 46)	EA.		1
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-1)	LF.		35
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-2)	LF.		46
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-3)	LF.		464
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-4)	LF.		34
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-9)	LF.		32
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-14)	LF.		16
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-17)	LF.		260
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-19)	LF.		223
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-21)	LF.		215
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-23)	LF.		302
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-43)	LF.		44
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-46)	LF.		13
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-47)	LF.		25
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-54)	LF.		28
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-30)	LF.		183
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-32)	LF.		46
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-38)	LF.		26
	2503-7275015	Sewer, 1500D Storm, 15" (Line P-40)	LF.		78
	2503-7275018	Sewer, 1500D Storm, 18" (Line P-11)	LF.		90
	2503-7275018	Sewer, 1500D Storm, 18" (Line P-12)	LF.		296
	2503-7275018	Sewer, 1500D Storm, 18" (Line P-44)	LF.		245
	2503-7275018	Sewer, 1500D Storm, 18" (Line P-45)	LF.		284
	2503-7275018	Sewer, 1500D Storm, 18" (Line P-58A)	LF.		96
	2503-7275018	Sewer, 1500D Storm, 18" (Line P-58B)	LF.		272
	2503-7275018	Sewer, 1500D Storm, 18" (Line P-59)	LF.		46
	2503-7275024	Sewer, 1500D Storm, 24" (Line P-5A)	LF.		18
	2503-7275024	Sewer, 1500D Storm, 24" (Line P-6)	LF.		45
	2503-7325015	Sewer, 2000D Storm, 15" (Line P-27)	LF.		73
	2503-7325015	Sewer, 2000D Storm, 15" (Line P-41)	LF.		252
	2503-7325015	Sewer, 2000D Storm, 15" (Line P-42)	LF.		98
	2503-8460010	Utility Access, RA-1 (No. 58)	EA.		1
	2503-8460020	Utility Access, RA-2 (No. 28)	EA.		1
	2503-8460020	Utility Access, RA-2 (No. 47)	EA.		1
	2503-8460020	Utility Access, RA-2 (No. 51)	EA.		1
	2503-8460020	Utility Access, RA-2 (No. 54)	EA.		1

REFERENCE INFORMATION

100-4
03-29-94

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2416-0100015	Apron, Concrete, 15" Line P-2 Line P-14 Line P-47 Line P-38
2416-0100018	Apron, Concrete, 18" Line P-58A Line P-59
2416-0100024	Apron, Concrete, 24" Line P-5A
2416-8325040	Tee Section, Concrete Pipe, 15" x 15" Line P-21
2416-8325080	Tee Section, Concrete Pipe, 18" x 18" Line P-58B
2416-4005015	RF-26 Pipe Apron Guard, 15" Line P-14
2416-4005018	RF-26 Pipe Apron Guard, 18" Line P-58A
2416-4005024	RF-26 Pipe Apron Guard, 24" Line P-5A
2417-0225015	Aprons, Metal, 15 in. Dia. Line P-32
2417-1060015	Culvert, Corrugated Metal Roadway Pipe, 15 in. Dia. Line P-32 - 70 L.F.
2417-1060015	Culvert, Corrugated Metal Roadway Pipe, 15 in. Dia. Line P-32 - 7 L.F.
2417-2550015	Elbows, Corrugated Metal Pipe, 15 in. Dia. Line P-32 - Two 7.5° Elbows
2503-4450030	Intake, RA-3 No's. 3, 41, 44, 45
2503-4450050	Intake, RA-5 No. 7
2503-4450350	Intake, RA-35 No's. 42, 43, 46
2503-7275015	Sewer, 1500D Storm , 15" Line P-1 - 35 L.F. Line P-2 - 46 L.F. Line P-3 - 464 L.F. Line P-4 - 34 L.F. Line P-9 - 32 L.F. Line P-14 - 15 L.F. Line P-17 - 260 L.F. Line P-19 - 225 L.F. Line P-21 - 215 L.F. Line P-23 - 304 L.F. Line P-43 - 44 L.F. Line P-46 - 13 L.F. Line P-47 - 25 L.F. Line P-54 - 33 L.F. Line P-30 - 183 L.F. Line P-32 - 46 L.F. Line P-38 - 26 L.F. Line P-40 - 2 L.F.

REFERENCE INFORMATION

100-4
03-29-94

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM CODE	DESCRIPTION
2503-7275018	Sewer, 1500D Storm , 18" Line P-11 - 90 L.F. Line P-12 - 296 L.F. Line P-44 - 245 L.F. Line P-45 - 284 L.F. Line P-58A- 96 L.F. Line P-58B- 273 L.F. Line P-59 - 36 L.F.
2503-7275024	Sewer, 1500D Storm, 24" Line P-5A - 18 L.F. Line P-6 - 45 L.F.
2503-7325015	Sewer, 2000D Storm, 15" Line P-27 - 73 L.F. Line P-41 - 252 L.F. Line P-42 - 88 L.F.
2503-8460010	Utility Access, RA-1 No. 58
2503-8460020	Utility Access, RA-2 No's. 28, 47, 51, 54

The cost of storm sewer pipes, intakes, utility access, etc. 46% state and 54% city.

(1) These quantities are included in the quantities on sheet C.01 and C.02.

FOR INFORMATION ONLY

STORM SEWER CITY PARTICIPATION (HUMBOLDT)

D1

Refer to "H" sheets for corrected R.O.W.

CORINTH TWP.
T91N R29W
SEC. 11

City Of Humboldt

STA. 215+30.00
BEGIN PROJECT
Begin A.C.C. Base Widening & Resurfacing

Sta. 222+50.00
Begin 52'-0" E-E A.C.C. Base Widening & Resurfacing

P.O.T. Sta. 224+93.37 (1989)
=P.O.T. Sta. 224+93.37 F-169-7(900)--20-46 1978 Survey
=P.O.T. Sta. 224+93.37 As Built Plans (1933)

P.O.T. Sta. 226+13.20
=P.I. Sta. 226+13.20 Side St. Survey Rt.

39' of 36" Unclass Ext. Pipe & 2-Unclass. Aprons

720' Taper (60:1) Painted Taper
240' SEE TYPICAL T102
480' Taper (48:1)
9.0' A.C.C. Shoulder With 6" Sloped C&G Unit
Bldg.
10" C.M.P.
A.C. Parking
Rock Parking
Type "C" Ent.
+50.5~50.2' R.O.W. Rail
Lot Cor. +76.8 50.0
Lot Cor. +0.9 50.0
Lot Cor. +29.8 118'
Ho.
163'
108'
86'
230
+98
TP
2"G
G-8 C.M.P.
Sign
3rd St.
A.C. Mat Over 24' Conc.
52'-0" E-E
JACK CROSS PIPE
2"H.R.
Son.
Gravel
80'
200' Taper (20:1)
+32.0~53.9' Rt. R.O.W. Rail
24" ø STS. M.H.
Conc. Pipe
TVP
14" CASING PIPE
BORE & JACK CASING (FOR FUTURE WATERMAIN)
93°15'46"
144' of 36" Culvert
Pipe & 2 Aprons
F.L.'s - Inlet 1109.8 Outlet 1099.0
Skew 15° Rt. Ahead (45' Lt.-112' Rt.)
Sta. 226+15.7
24" ø Conc. Pipe Surrounded By Flowable Mortar Inside Of 3.0'x3.5'x68.2' R.C.B.
0.7' Hdwl., 0.5'x7.0' Wings, & 0.7' Aprons, Rt. & Lt.
D.A. = 252 Ac., R.-F. & Tiled
Fill With Flowable Mortar
Sta. 225+50
60" ø x 128' R.C.P.
8' Aprons Rt. & Lt.
D.A. = 252 Ac., R.-F. & Tiled
Extend 26.0' Lt. & 22.0' Rt. And Relay Aprons.
1" Bevel on Extensions (Each End)
Skew 30° Lt. Ahead
Fl. Inlet 1109.5 Outlet 1099.0
14th Ave.
Rock
Prop. Type "C" Ent. +00 Field Ent.
SEC. 12
PTIN
0 25 50
SCALE

B.O.P. +30 1129.49
B.O.P. 3' Above Existing
75' A.C.C. Runout
℄ GRADE
EXISTING ℄ GRADE
+00 1127.54
+00 1125.57
+00 1124.16
+50 1121.59
-0.99%
-1.41%
-1.71%
Irregular V.C.
Irregular V.C.
+25 Lt. 1113.8
-5.7% Lt. Ditch Grade
+00 Lt. 1109.5
+0.5% Lt. Ditch Grade
+46 Lt. 1109.7
+2.8% Lt. Ditch Grade
+1.8% Rt. Ditch Grade
+55 Rt. 1109.8
+00 Lt. 1111.2
+3.7% Lt. Ditch Grade
+2.9% Rt. Ditch Grade
+00 Rt. 1110.6
+00 Lt. 1114.9
+1.3% Lt. Ditch Grade
+1.2% Rt. Ditch Grade
+50 Rt. 1114.9
+50 Rt. 1113.3
SEE SHEET NO. H.01 FOR R.O.W. DETAILS
Lt. Rt.
5'x10' Ditch
6'x10' Ditch
No Ditch
No Ditch
See Ditch Grade Above
See Ditch Grade Above
1130
1125
1120
1115
1110
215+30 6 7 8 9 220 1 2 3 4 225 6 7 8 9 230
1129.49 1129.50 1129.52 1129.41 1129.31 1129.12 1128.95 1128.65 1128.32 1127.93 1127.54 1126.56 1125.57 1124.16 1122.45 1121.59 1120.86 1120.25 1119.92 1119.64 1119.47 1119.43 1119.58 1119.83 1120.18 1120.72 1121.39 1122.24

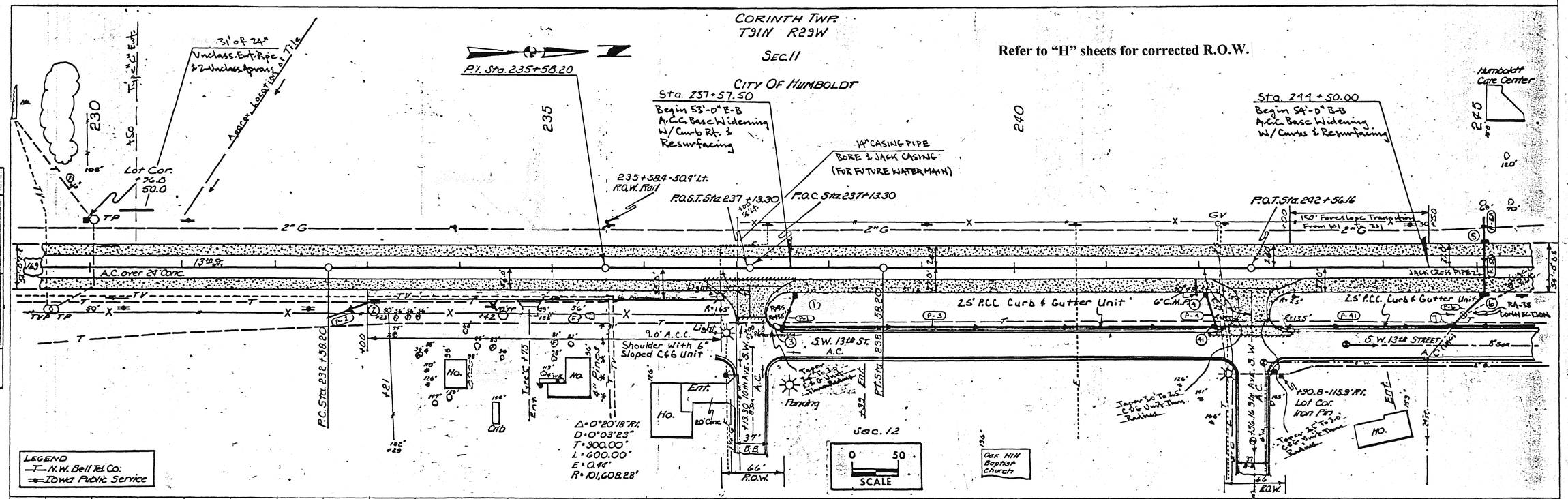
PLAN
PROFILE

HUMBOLDT COUNTY

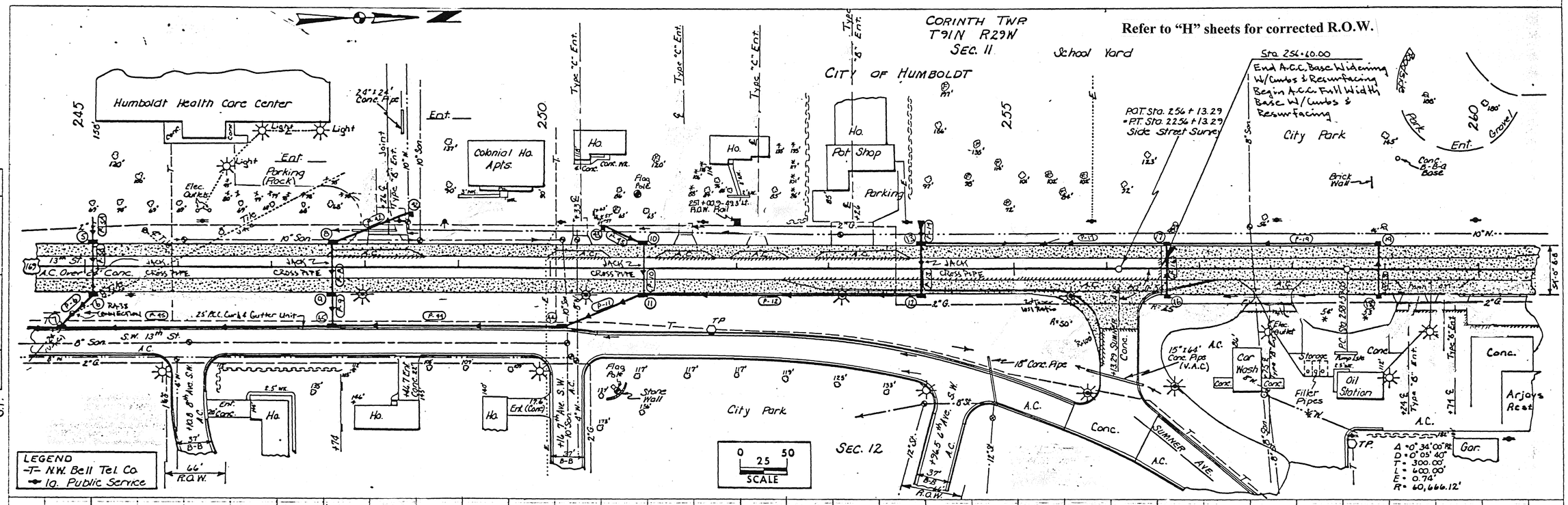
PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	8			

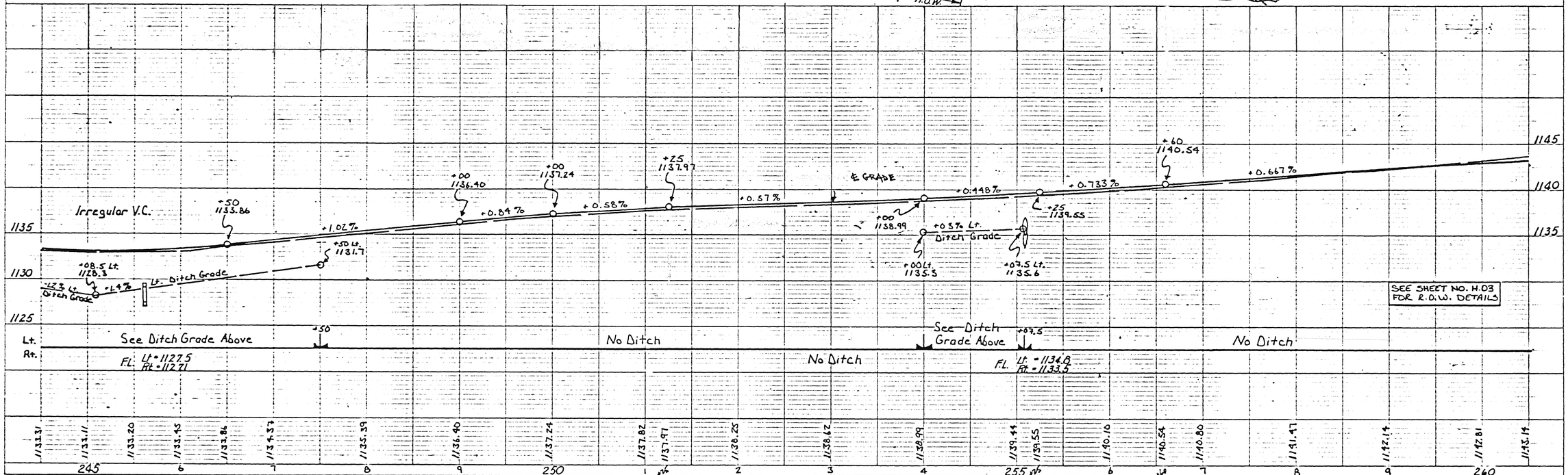
PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NHS-F-169-7(35)--19-46	IOWA	8		D.01	

D1


CORINTH TWP.
T91N R29W
SEC. 11
Refer to "H" sheets for corrected R.O.W.
CITY OF HUMBOLDT
P.I. Sta. 235+58.20
Sta. 237+57.50
Begin 53'-0" E-B
A.C.C. Base Widening
W/ Curb Rt. & Resurfacing
Sta. 244+50.00
Begin 54'-0" B-B
A.C.C. Base Widening
W/ Curbs & Resurfacing
Humboldt Care Center
31' of 24" Unclass. Ent. Pipe & 2 Unclass. Aprons
Approx. Location of Tile
Lot Cor.
36.8
50.0
14" CASING PIPE
BORE & JACK CASING
(FOR FUTURE WATER MAIN)
235+38.4-50.9' Lt.
R.O.W. Rail
P.O.S.T. Sta. 237+13.30
P.O.C. Sta. 237+13.30
P.O.T. Sta. 242+56.16
150' Foreslope Transition
From W/ 2:1 To 3:1
13th St.
A.C. over 24" Conc.
JACK CROSS PIPE
2.5' P.C.C. Curb & Gutter Unit
6" C.M.P.
S.W. 13th St.
A.C.
S.W. 13th STREET
8" Conc.
9.0' A.C.C.
Shoulder With 6" Sloped C&G Unit
Parking
Ent.
Ho.
Garage
Grid
Tyler St. 175
4" Pinot
P.C. Sta. 232+58.20
P.T. Sta. 238
Sec. 12
Oak Hill Baptist Church
Jasper St. To 2.5' C&G Unit Then Reduce
+90.8-115.9' Rt.
Lot Cor.
Iron Pin
Δ = 0°20'18" Rt.
D = 0°03'23"
T = 300.00'
L = 600.00'
E = 0.49'
R = 101,608.28'
66' R.O.W.
37' B-B
SCALE
0 50
LEGEND
N.W. Bell Tel. Co.
Iowa Public Service
PLAN
PROFILE
Irregular V.C.
℄ GRADE
-0.81%
+2.24%
+2.37%
+1.0% Lt. Ditch Grade
+0.8% Lt. Ditch Grade
+1.3% Lt. Ditch Grade
+2.6% Rt. Ditch Grade
+1.2% Rt. Ditch Grade
See Ditch Grade Above
No Ditch
4' x 10' Ditch
-1.2% Lt. Ditch Grade
+1.4% Lt. Ditch Grade
SEE SHEET NO. H.02 FOR R.O.W. DETAILS
1120.72
1121.39
1122.24
1123.24
1124.33
1125.52
1127.88
1130.12
1132.36
1133.37
1134.27
1135.05
1135.69
1136.20
1136.55
1136.71
1136.82
1136.81
1136.49
1136.15
1136.06
1135.25
1134.45
1133.68
1133.31
1133.11
1133.20
HUMBOLDT COUNTY
PROJECT NUMBER
NHS-F-169-7(35)--19-46
STATE
IOWA
FED ROAD DIST. NO.
FISCAL YEAR
SHEET NO.
TOTAL SHEETS
D.02

Refer to "H" sheets for corrected R.O.W.



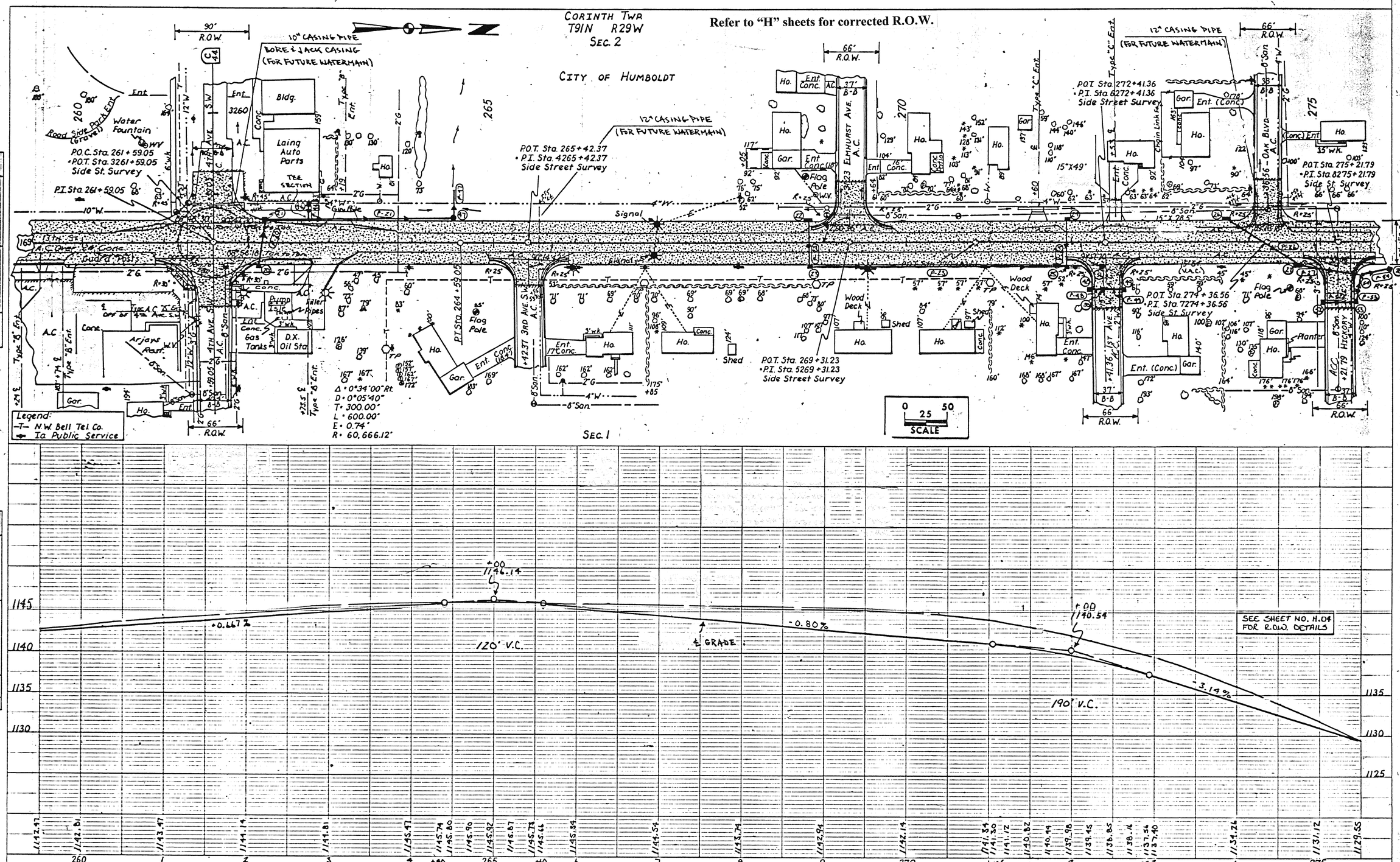


HUMBOLDT COUNTY

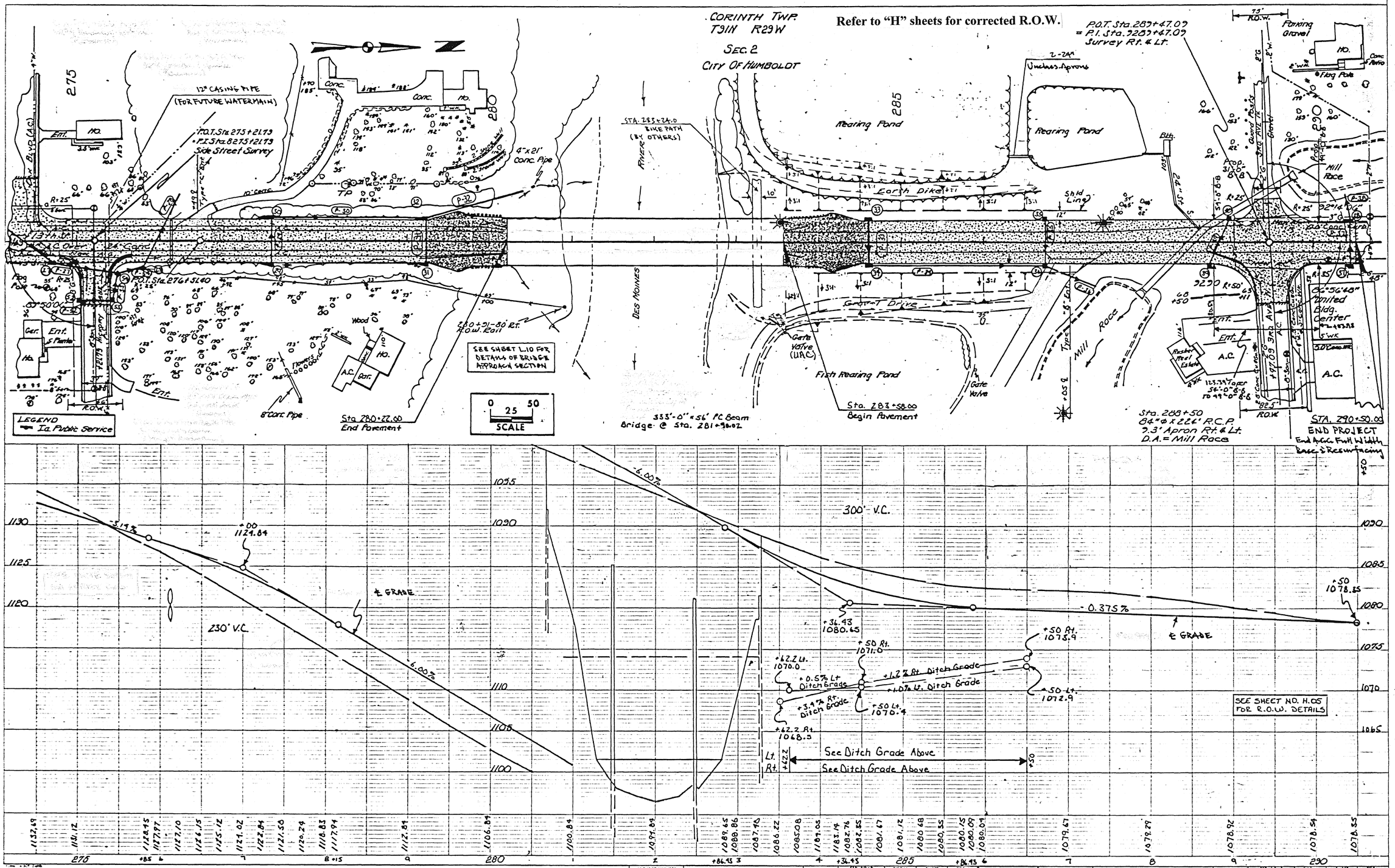
PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	8			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NHS-F-169-7(35)--19-46	IOWA	8		D.03	

Refer to "H" sheets for corrected R.O.W.



Refer to "H" sheets for corrected R.O.W.



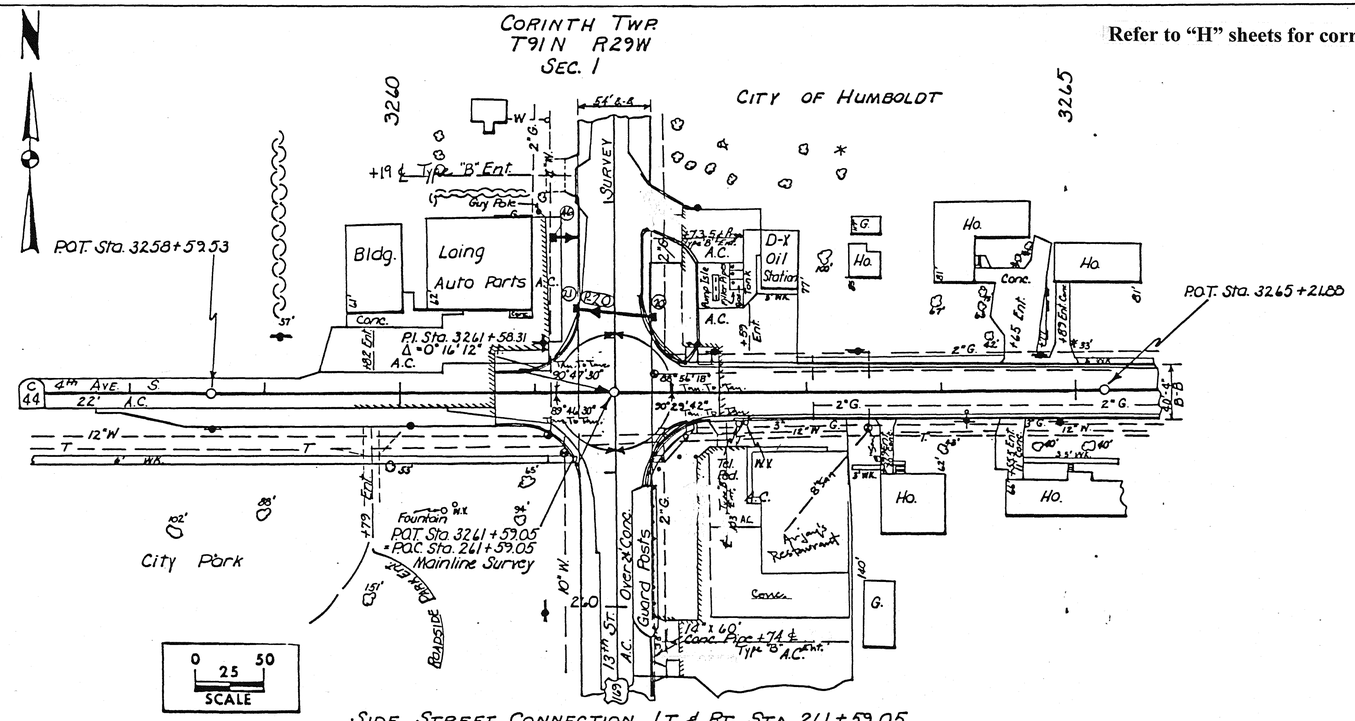
HUMBOLDT COUNTY

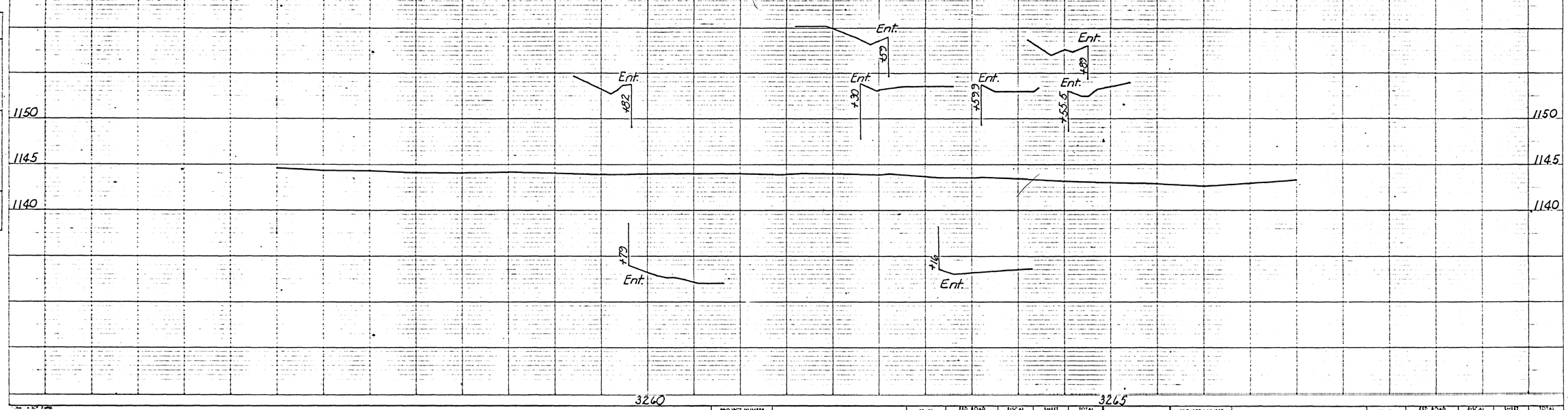
PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	8			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NHS-F-169-7(35)--19-46	IOWA	8		D.05	

D1

Refer to "H" sheets for corrected R.O.W.





PLAN — SURVEYED / PLOTTED / TRACED / CHECKED

PROFILE — SURVEYED / PLOTTED / TRACED / CHECKED / SUBMITTED / STRUCTURE INVESTIGATION

HUMBOLDT CO.

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	1			

PROJECT NUMBER NHS-F-169-7(35)- -19-46

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	1		E.01	

D1

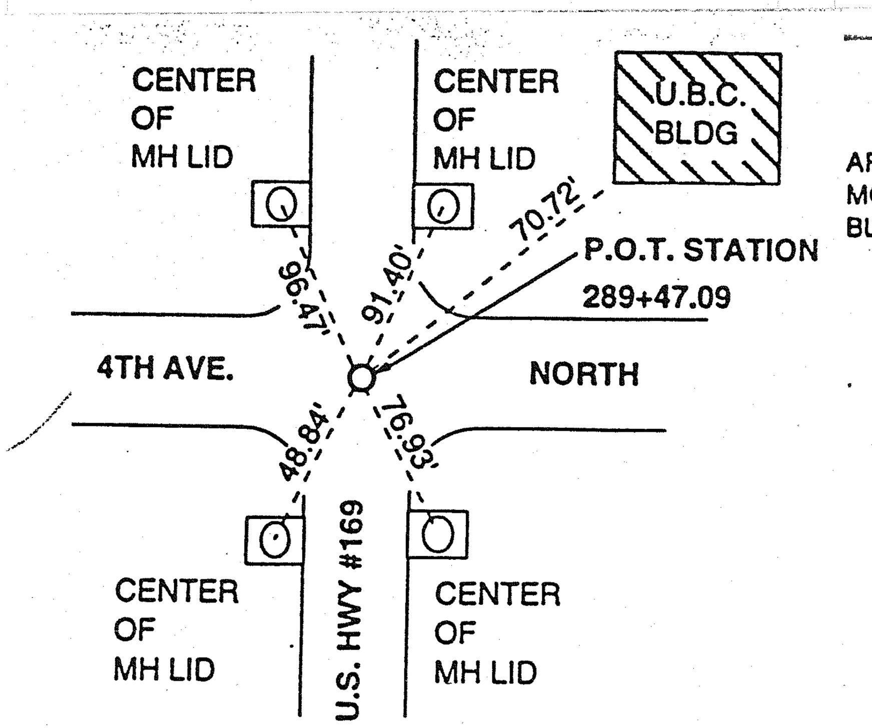
1	5,000.0000	5,000.0000	100.00	START
2	4,331.7425	4,977.3938	93.41	PI
3	4,711.1085	4,937.6655	93.91	ROW PIN
4	4,892.3177	4,935.5648	91.68	ROW PIN
5	4,891.9046	4,900.8244	91.48	ROW PIN
6	5,018.9784	5,029.3689	91.19	ROW PIN
7	5,019.1411	5,049.3913	90.92	ROW PIN
8	5,186.8332	4,897.3796	92.03	ROW PIN
9	5,536.8340	4,888.1320	85.62	ROW PIN
10	5,627.0694	4,912.0385	90.22	ROW PIN
11	5,637.8307	4,911.8813	90.23	PROP CORNER
12	5,637.4983	4,911.3445	87.13	ROW RAIL
13	5,820.3200	5,019.6940	83.78	ROW RAIL
14	5,838.1799	5,019.5495	82.26	ROW PIN
15	5,839.1038	5,040.8392	80.85	ROW PIN
16	5,988.8597	5,215.7067	85.35	SD RD PI
17	6,000.7258	4,957.6343	85.29	POT.226+13.2
18	7,036.8677	4,871.0679	1,133.25	ISTPT
19	4,331.7135	4,977.3668	93.35	CHK 2
20	5,886.8118	4,854.1607	81.83	ROW PIN
21	5,888.9065	4,884.0763	81.03	ROW PIN
22	5,889.1559	4,909.2594	80.20	ROW PIN
23	5,887.8598	4,909.0750	80.64	PROP PIN
24	5,936.8154	4,883.4749	76.02	ROW PIN
25	6,026.7881	5,575.5643	86.43	CTRL PT
26	6,015.1336	5,099.5301	74.49	ROW PIN
27	6,070.7317	5,051.9703	73.44	ROW PIN
28	6,138.5992	5,051.1323	74.23	ROW PIN
29	6,288.2861	5,029.2838	75.38	ROW PIN
30	6,383.7083	4,903.1429	78.21	PROP CORNER
31	6,187.8365	4,905.5369	77.77	PROP CORNER
32	6,645.7092	4,950.0889	85.60	PC 232+58.20
33	6,646.5908	5,025.0642	84.22	ROW PIN
34	6,678.0971	4,999.7605	85.38	ROW PIN
35	7,036.9145	4,871.2927	92.19	CHK 18
36	6,000.7580	4,957.7422	78.57	CHK 17
37	5,988.8326	5,215.6274	78.89	CHK 16
38	6,947.7410	4,996.2513	92.95	RAIL
39	6,945.6328	4,946.3899	92.61	PI 235+58.20
40	6,945.3139	4,896.5341	86.80	RAIL
41	6,944.0634	4,856.8512	89.66	ROW PIN
42	7,245.2392	4,869.5960	93.99	ROW PIN
43	7,245.6589	4,944.6279	95.77	PT 238+58.20
44	7,152.5625	4,957.1114	95.03	EDGE ASPHALT
45	7,136.4086	4,963.5733	94.60	EDGE ASPHALT
46	7,120.2995	4,979.7251	94.14	EDGE ASPHALT
47	7,117.7903	4,995.2187	93.99	EDGE ASPHALT
48	7,131.6453	5,010.9837	94.15	EDGE ASPHALT
49	7,144.4548	5,014.1190	94.37	EDGE ASPHALT
50	7,046.9478	4,958.0799	93.86	EDGE ASPHALT
51	7,074.9562	4,974.7925	93.68	EDGE ASPHALT
52	7,084.9309	4,991.5289	93.90	EDGE ASPHALT
53	7,066.4235	5,043.0375	94.60	BR
54	7,079.9637	5,050.0440	94.59	MR
55	7,084.9163	5,062.7308	94.38	ER
56	7,085.9344	5,113.6525	94.03	BOC
57	7,122.8167	5,109.9747	94.06	BOC
58	7,121.9442	5,061.0858	94.38	BR
59	7,130.3416	5,046.2822	94.95	MR
60	7,141.5388	5,042.6308	96.16	ER
61	7,607.3882	5,040.3286	91.69	BR
62	7,624.6122	5,050.0648	90.83	MR
63	7,627.6023	5,057.3069	90.80	ER
64	7,628.0628	5,081.3857	90.20	BOC
65	7,665.1376	5,093.8311	89.80	BOC
66	7,664.4023	5,059.0886	90.68	BR
67	7,670.4529	5,044.5095	90.47	MR
68	7,681.6919	5,039.2357	89.60	ER
69	7,687.4930	5,010.9591	90.09	EDGE ASPHALT
70	7,670.5419	5,004.1484	91.11	EDGE ASPHALT
71	7,661.8054	4,993.4052	91.93	EDGE ASPHALT
72	7,661.6722	4,975.6679	92.13	EDGE ASPHALT
73	7,674.7541	4,962.4585	92.58	EDGE ASPHALT
74	7,698.5214	4,953.7516	93.11	EDGE ASPHALT
75	7,600.2893	4,954.7301	93.81	EDGE ASPHALT
76	7,619.9640	4,964.9143	92.65	EDGE ASPHALT
77	7,631.7879	4,982.1385	92.19	EDGE ASPHALT
78	7,624.8540	5,000.6649	91.73	EDGE ASPHALT
79	7,611.0755	5,008.3873	91.83	EDGE ASPHALT
80	7,599.2548	5,011.6807	91.84	EDGE ASPHALT
81	7,643.5781	4,942.3132	93.81	POT 242+56.16
82	9,057.7010	5,023.5275	100.32	INST PT
83	7,827.5105	4,891.2308	92.22	PROP PIN
84	7,826.6251	4,861.1736	93.85	ROW PIN
85	7,886.9164	4,860.8593	93.00	ROW PIN
86	7,827.4990	4,891.2726	85.80	CHK 83
87	8,437.7975	5,006.6120	85.28	BOC
88	8,442.7915	5,035.4417	84.70	BOC
89	8,567.3914	5,005.7962	86.03	PC
90	8,568.3092	5,034.6974	85.42	PC
91	8,680.1098	5,010.2647	86.74	POC
92	8,687.2599	5,040.0378	86.09	POC
93	8,783.0520	5,055.5524	87.25	BR
94	8,799.9623	5,068.3697	87.47	MR
95	8,802.4348	5,083.8424	86.90	ER
96	8,783.2832	5,132.5513	85.96	BOC
97	8,816.6747	5,148.6624	86.04	BOC
98	8,835.1640	5,102.9371	86.81	BR
99	8,849.4333	5,083.7371	87.61	MR
100	8,866.4310	5,081.9924	88.18	ER
101	8,837.5981	5,038.7888	88.81	POC
102	8,953.4851	5,078.0700	90.14	BR
103	8,973.1120	5,075.8007	90.78	MR
104	8,981.0200	5,060.2842	91.00	ER
105	8,990.8193	5,003.4695	91.64	BR
106	8,965.8861	4,973.4741	91.90	MR
107	8,933.0491	4,959.6255	91.78	ER
108	8,689.8416	4,961.3527	90.14	BEGIN CURB
109	8,634.8415	4,948.3845	90.62	END TAPER
110	9,101.3398	4,946.3114	93.30	END TAPER
111	9,040.8287	4,959.0205	92.57	BR
112	9,024.1303	4,970.9688	92.23	MR
113	9,021.0984	4,980.6814	91.99	ER
114	9,020.9504	5,051.2359	91.70	BR
115	9,027.4933	5,073.5648	91.86	MR
116	9,042.7659	5,090.2322	91.87	ER

117	9,093.0751	5,131.9791	91.93	BOC
118	9,061.5139	5,169.0288	90.55	POC
119	9,000.8327	5,055.7264	90.91	CENTER SEAM
120	8,994.7510	4,959.2258	91.83	CENTER SEAM
121	9,580.1464	4,981.1101	98.34	PROP PIN
122	9,680.2073	4,981.6744	97.53	PROP PIN
123	9,580.1037	4,981.1007	90.56	CHK121
124	9,246.3629	4,932.9023	88.19	PCSTA.258+59.05
125	9,546.3650	4,931.1322	90.66	PISTA. 261+59.05
126	9,482.8319	4,952.6947	89.69	BR
127	9,511.6519	4,965.9152	89.74	MR
128	9,527.1416	4,998.4949	89.54	ER
129	9,528.7611	5,103.3943	90.64	BOC
130	9,568.7495	5,092.1006	90.63	BOC
131	9,567.3160	5,000.1088	89.77	ER
132	9,577.2431	4,972.2873	90.18	MR
133	9,617.6764	4,952.0486	90.62	BR
134	9,650.7961	4,952.2598	90.96	BOC
135	9,533.2077	4,826.7120	89.88	EDGASPH
136	9,532.0122	4,854.4825	89.94	EDGASPH/BR
137	9,521.2231	4,887.6784	89.84	EDGASPH/MR
138	9,482.0586	4,909.1840	89.73	EDGASPH/ER
139	9,426.1343	4,919.8333	89.33	EDGASPH
140	9,565.4820	4,827.7306	89.69	EDGASPH
141	9,565.5573	4,858.6149	89.81	EDGASPH/BR
142	9,578.5178	4,887.3614	90.12	EDGASPH/MR
143	9,619.4650	4,907.9873	90.61	EDGASPH/ER
144	9,682.7694	4,908.7227	90.83	EDGASPH
145	9,728.3227	4,910.9994	91.07	EDGASPH
146	9,771.7991	4,920.0376	91.53	EDGASPH
147	9,811.2008	4,920.6754	91.79	EDGASPH
148	9,755.1600	4,981.9880	90.53	PROP PIN
149	9,886.1220	4,954.5002	91.44	BR
150	9,902.2835	4,960.3257	91.44	MR
151	9,910.8940	4,979.2216	91.20	ER
152	9,910.4686	5,031.5440	91.18	BOC
153	9,947.4279	5,031.8993	91.08	BOC
154	9,947.9008	4,979.8237	91.24	ER
155	9,951.1491	4,967.7384	91.37	MR
156	9,973.8201	4,955.2434	91.50	BR
157	9,929.7192	4,932.6656	92.06	POTSTA.265+42.37
158	9,846.3638	4,932.3286	92.09	PTSTA.264+59.05
159	10,340.1080	4,855.3008	88.31	BOC
160	10,303.1538	4,856.5314	88.36	BOC
161	10,302.0783	4,881.4483	89.24	BR
162	10,295.8876	4,902.1212	90.23	MR
163	10,272.2251	4,913.7660	91.08	ER
164	10,339.0703	4,881.7563	89.31	BR
165	10,344.5365	4,901.9254	90.25	MR
166	10,364.8072	4,914.3745	91.14	ER
167	10,651.1459	4,887.8083	86.18	INSTPT
168	9,929.6876	4,932.6649	85.36	CHK
169	10,318.5968	4,934.1965	84.75	POTSTA.269+31.23
170	10,628.6411	4,935.4702	80.65	PISTA.272+41.36
171	10,648.7214	5,029.1852	79.37	BOC
172	10,647.9077	4,982.4467	79.10	ER
173	10,653.7922	4,966.5556	79.04	MR
174	10,671.8004	4,957.8107	78.75	BR
175	10,583.8758	4,957.4084	81.07	BR
176	10,602.9827	4,963.9541	80.54	MR
177	10,611.0126	4,982.7748	79.64	ER
178	10,612.0418	5,039.3430	79.58	BOC
179	10,802.2492	4,915.9084	74.47	BR
180	10,805.8859	4,909.0425	74.32	MR
181	10,806.9063	4,898.9589	73.55	ER
182	10,806.8168	4,864.2159	73.27	BOC
183	10,839.5636	4,864.7301	72.05	BOC
184	10,840.1437	4,902.1776	72.47	ER
185	10,841.1114	4,908.2206	72.84	MR
186	10,843.6183	4,914.0483	72.62	BR
187	10,823.8346	4,936.2270	74.14	POTSTA.274+36.56
188	10,909.0727	4,936.5622	70.30	POTSTA.275+21.79
189	11,038.6935	4,937.0953	63.39	POTSTA.276+51.00
190	10,952.2537	4,957.3691	67.46	BR
191	10,936.3903	4,963.6408	68.09	MR
192	10,928.2498	4,980.4378	68.74	ER
193	10,927.5236	5,034.6578	71.12	BOC
194	10,890.4908	5,033.0654	71.79	BOC
195	10,891.4009	4,981.6328	70.69	ER
196	10,886.2046	4,965.6325	70.40	MR
197	10,868.2097	4,956.3617	71.43	BR
198	10,752.6670	4,972.0786	76.18	INSTPT
199	12,102.3613	4,980.9124	1,079.97	INSTPT
200	11,038.6747	4,937.1004	56.94	CHK189
201	12,334.3241	4,942.2789	12.63	POTSTA.289+47.09
202	12,534.5800	4,918.5795	10.69	BOC
203	12,391.7888	4,917.9819	11.18	BOC
204	12,380.8559	4,916.3039	11.30	EDGASPH
205	12,368.1997	4,910.1672	11.35	EDGASPH
206	12,321.2378	4,912.2496	11.92	EDGASPH
207	12,311.6164	4,921.2398	12.50	EDGASPH
208	12,225.1989	4,924.9134	13.81	EDGASPH
209	12,213.1957	4,953.8142	14.09	EDGASPH
210	12,260.6438	4,955.5596	13.60	BOC
211	12,287.2452	4,963.5289	13.10	BR
212	12,305.8296	4,977.5769	12.27	MR
213	12,316.6577	5,003.5598	11.51	ER
214	12,318.7092	5,044.4377	10.71	BOC
215	12,360.3471	5,050.8417	12.02	BOC
216	12,357.5972	4,994.4141	11.68	ER
217	12,364.4458	4,978.7523	11.74	MR
218	12,390.6226	4,967.0522	11.79	BR
219	12,447.6869	4,967.3831	11.05	BOC
220	12,219.8746	4,895.1486	11.27	INSTPT
221	12,204.1112	4,839.4875	7.83	REF. SESHED
222	12,135.2604	4,910.9974	10.53	REF. LTPOLE
223	11,995.0315	5,076.9962	6.30	INSTPT
224	10,524.5671	4,904.9798	76.45	INSTPT
225	12,102.3779	4,980.9208	7.78	CHK199
226	8,805.1062	4,918.5597	66.12	INSTPT
227	7,319.4293	4,926.3460	57.26	INSTPT
228	7,036.7782	4,871.2975	48.02	CHK18
229	9,057.7119	5,023.5818	51.43	CHK82
230	4,999.8731	5,000.2879	42.79	CHK1
231	7,036.7948	4,871.2631	41.69	CHK228/18
232	5,988.7316	5,215.8989	27.96	CHK

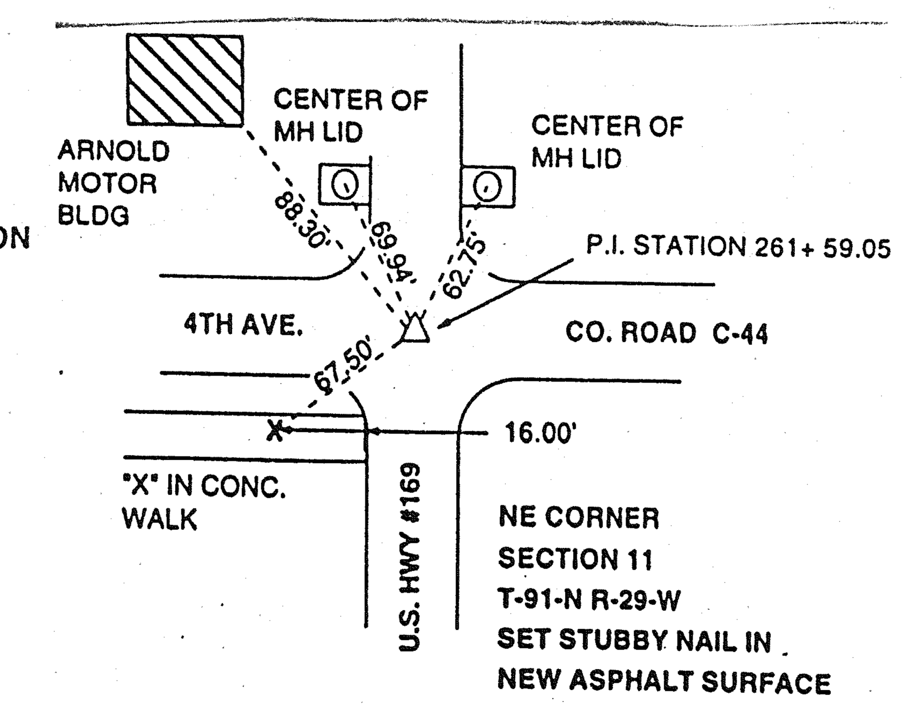
233	9,606.0710	4,931.3483	92.24	COMP
234	9,597.4312	4,931.3468	92.17	COMP
235	9,546.4032	4,931.1382	91.80	CHK 125
236	9,496.9294	4,931.4333	91.55	COMP
237	9,477.6516	4,931.5542	91.42	COMP
238	9,547.2794	4,988.1252	91.42	COMP
239	9,547.2314	4,987.7466	91.42	COMP
240	9,545.7008	4,859.8289	91.61	COMP
241	9,567.3748	4,931.2162	90.66	COMP
242	9,567.1469	4,988.2058	90.66	COMP
243	9,597.3232	4,958.3466	92.17	COMP
244	9,606.1790	4,904.3485	92.24	COMP
245	9,597.1466	4,988.3460	0.00	RAD PT
246	9,606.1989	4,859.3485	0.00	RAD PT
247	9,526.9253	4,931.2469	90.66	RAD PT
248	9,527.2594	4,987.8559	90.66	BRCOMP
249	9,497.2649	4,988.4323	0.00	RAD
250	9,476.2013	4,859.5688	0.00	RAD
251	9,497.2498	4,988.4388	92.45	SET 249
252	9,476.2008	4,859.5678	91.73	SET 250
253	12,747.9462	4,943.9111	10.92	PI
254	12,289.2345	4,942.0981	0.00	289+02
255	11,787.2385	4,940.0845	0.00	284+00
256	7,870.5239	106,550.9865	0.00	RAD PT
257	9,604.3694	65,597.9660	0.00	RAD PT
258	9,545.6636	4,859.7556	0.00	COMP
259	9,545.6646	4,859.8556	0.00	COMP
260	9,541.4522	4,431.1563	0.00	COMP
261	9,000.7155	4,934.3420	0.00	COMP
262	9,001.9260	5,434.3405	0.00	COMP
263	9,610.2441	4,904.3865	359.52	SET1085
264	9,602.2023	4,958.3690	360.32	SET1086
265	7,036.8127	4,871.0638	91.62	CHK18
266	8,787.2490	4,908.5851	95.71	SET1075
267	8,787.6034	4,962.5799	96.15	SET1076
268	8,487.5962	4,964.3419	93.44	SET1077
269	8,487.2765	4,910.3447	92.31	SET1079
270	8,151.8347	4,912.2922	89.87	SET1083
271	8,152.1028	4,966.3008	90.28	SET1084
272	7,895.8037	4,917.8199	1,126.61	COMP
273	7,896.0763	4,963.8101	1,126.14	COMP
274	7,087.4604	4,945.5578	92.61	COMP
275	7,087.1377	4,890.5588	1,124.53	COMP
276	7,087.7713	4,998.5569	1,127.66	COMP
277	7,074.8044	5,061.5810	102.92	CHKBM
278	7,074.7880	5,061.5229	1,137.35	BM
279	8,152.0509	4,962.4370	1,133.22	247+64RT
280	7,676.4359	5,053.3610	1,133.43	BM4
1000	7,066.6671	4,980.8874	0.00	COMP
1001	7,083.2982	4,997.0477	0.00	COMP
1002	7,133.8100	5,011.2300	0.00	COMP
1003	7,120.2400	4,997.9800	0.00	COMP
1004	7,120.2300	4,997.3700	0.00	COMP
1005	7,145.1384	4,972.2965	0.00	COMP
1006	7,601.0000	4,969.5500	0.00	COMP
1007	7,626.1300	4,994.0500	0.00	COMP
1008	7,626.1400	4,994.4000	0.00	COMP
1009	7,612.2200	5,008.4800	0.00	COMP
1010	7,676.7300	5,008.1000	0.00	COMP
1011	7,663.1600	4,994.8700	0.00	COMP
1012	7,663.1500	4,994.5300	0.00	COMP
1013	7,687.9900	4,969.0400	0.00	COMP
1014	8,908.4100	4,961.8800	0.00	COMP
1015	8,928.4200	4,963.7600	0.00	COMP
1016	8,966.7700	4,988.0600	0.00	COMP
1017	8,980.7200	5,038.7700	0.00	COMP
1018	9,021.0910	4,986.1365	0.00	COMP
1019	9,045.9400	4,961.0700	0.00	COMP
1020	9,497.0495	4,958.9409	0.00	COMP
1021	9,527.0984	4,988.5052	0.00	COMP
1022	9,567.5161	4,988.8472	0.00	COMP
1023	9,597.5174	4,958.8463	0.00	COMP
1024	9,477.6530	4,904.9782	0.00	COMP
1025	9,521.1658	4,860.0964	0.00	COMP
1026	9,561.1629	4,859.6033	0.00	COMP
1027	9,561.1000	4,842.5000	0.00	COMP
1028	9,606.1400	4,904.8460	0.00	COMP
1029	9,885.9500	4,959.4900	0.00	COMP
1030	9,910.8500	4,984.5900	0.00	COMP
1031	9,947.8500	4,984.6300	0.00	COMP
1032	9,972.9500	4,959.8400	0.00	COMP
1033	10,277.0500	4,907.0500	0.00	COMP
1034	10,302.1200	4,883.0300	0.00	COMP
1035	10,339.2200	4,881.4200	0.00	COMP
1036	10,363.2300	4,907.4000	0.00	COMP
1037	10,585.8200	4,962.2900	0.00	COMP
1038	10,610.7100	4,986.8300	0.00	COMP
1039	10,648.7400	4,987.5400	0.00	COMP
1040	10,673.8400	4,962.6400	0.00	COMP
1041	10,781.8600	4,909.0700	0.00	COMP
1042	10,806.9600	4,884.1700	0.00	COMP
1043	10,839.9800	4,884.6400	0.00	COMP
1044	10,864.8800	4,909.4000	0.00	COMP
1045	10,865.4400	4,963.4100	0.00	COMP
1046	10,890.3400	4,988.5100	0.00	COMP
1047	10,927.3400	4,988.5800	0.00	COMP
1048	10,952.4300	4,963.7500	0.00	COMP
1049	12,267.8800	4,969.0100	0.00	COMP
1050	12,317.6200	5,016.5500	0.00	COMP
1051	12,358.0400	5,003.7300	0.00	COMP
1052	12,391.2700	4,967.0100	0.00	COMP
1053	12,268.1000	4,915.0100	0.00	COMP
1054	12,291.5400	4,915.5900	0.00	COMP
1055	12,317.1400	4,891.2000	0.00	COMP
1056	12,348.2800	4,893.4300	0.00	COMP
1057	12,372.6600	4,917.5500	0.00	COMP
1058	12,391.4700	4,918.0100	0.00	COMP
1059	12,437.3900	4,942.6900	0.00	COMP

1060	5,642.1400	4,926.8500	0.00	COMP
1061	5,920.6200	4,923.5500	0.00	COMP
1062	6,009.6200	4,881.4900	0.00	COMP
1063	6,694.3900	4,984.3700	0.00	COMP
1064	7,149.7100	4,972.1900	0.00	COMP
1065	7,138.8400	5,011.2600	0.00	COMP
1066	7,596.5100	4,969.5700	0.00	COMP
1067	7,605.3300	5,008.5200	0.00	COMP
1068	7,863.8300	5,007.0000	0.00	COMP
1069	7,895.7800	4,913.8200	0.00	COMP
1070	7,896.1000	4,967.8100	0.00	COMP
1071	9,281.0800	4,959.6900	0.00	COMP
1072	9,280.7600	4,905.6900	0.00	COMP
1073	9,051.7600	4,907.0300	0.00	COMP
1074	9,052.0800	4,961.0300	0.00	COMP
1075	8,787.2700	4,908.5900	0.00	COMP
1076	8,787.5900	4,962.5800	0.00	COMP
1077	8,487.5900	4,964.3400	0.00	COMP
1078	8,443.1600	4,891.1000	0.00	COMP
1079	8,487.2700	4,910.3500	0.00	COMP
1080	8,400.8200	5,003.3500	0.00	COMP
1081	8,152.3300	5,005.3100	0.00	COMP
1082	8,237.0800	4,878.8100	0.00	COMP
1083	8,151.7800	4,912.3100	0.00	COMP
1084	8,152.1000	4,966.3100	0.00	COMP
1085	9,610.2400	4,904.3900	0.00	COMP
1086	9,602.2100	4,958.3600	0.00	COMP
1087	9,837.5300	4,901.8000	0.00	COMP
1088	9,661.5900	4,886.5900	0.00	COMP
1089	10,270.0200	4,907.0300	0.00	COMP
1090	10,271.8000	4,961.0300	0.00	COMP
1091	10,580.3000	4,962.2700	0.00	COMP
1092	10,580.5100	4,908.2700	0.00	COMP
1093	10,611.1800	4,991.3900	0.00	COMP
1094	10,624.1800	4,991.4400	0.00	COMP
1095	10,647.6800	4,991.5400	0.00	COMP
1096	10,624.3000	4,962.9400	0.00	COMP
1097	10,776.0100	4,909.0500	0.00	COMP
1098	10,861.8000	4,963.3900	0.00	COMP
1099	10,935.2400	4,976.6900	0.00	COMP
1100	10,890.6200	5,008.0100	0.00	COMP
1101	10,927.6200	5,008.1600	0.00	COMP
1102	10,969.2700	4,969.3200	0.00	COMP
1103	11,123.7900	4,964.4400	0.00	COMP
1104	11,124.0100	4,910.4400	0.00	COMP
1105	11,306.0100	4,911.1700	0.00	COMP
1106	11,305.7900	4,965.1700	0.00	COMP
1107	11,854.0000	4,913.3600	0.00	COMP
1108	11,853.7900	4,967.3600	0.00	COMP
1109	12,062.2900	4,968.1900	0.00	COMP
1110	12,062.5000	4,914.1900	0.00	COMP
1111	12,263.2800	4,969.0000	0.00	COMP
1112	12,287.5000	4,915.0900	0.00	COMP
1113	12,430.7900	4,967.1600	0.00	COMP
1114	12,430.9900	4,918.1700	0.00	COMP
1115	9,597.5161	4,988.8463	0.00	COMP
1116	9,497.1016	4,988.9409	0.00	COMP
1117	9,476.1659	4,860.0028	0.00	COMP
1118	9,606.1622	4,859.8460	0.00	COMP
1119	4,917.6017	4,970.4806	0.00	COMP
1120	4,917.4129	4,954.4818	0.00	COMP
1121	5,157.3962	4,951.6499	0.00	COMP
1122	5,357.7599	4,981.2879	0.00	COMP
1123	5,437.7543	4,980.3439	0.00	COMP
1124	5,637.8584	4,987.9834	0.00	COMP
1125	5,637.2448	4,935.9870	0.00	COMP
1126	5,637.1386	4,926.9876	0.00	COMP
1127	5,927.2246	4,932.5652	0.00	COMP
1128	5,927.1184	4,923.5659	0.00	COMP
1129	6,687.7812	4,975.5922	0.00	COMP
1130	6,687.8860	4,984.5916	0.00	COMP
1131	7,066.8017	4,997.3869	0.00	RP
1132	7,145.2299	4,997.2963	0.00	RP
1133	7,133.7252	4,997.7303	0.00	RP
1134	7,601.1350	4,994.5496	0.00	RP
1135	7,612.1402	4,994.4802	0.00	RP
1136	7,688.1452	4,994.0395	0.00	RP
1137	7,676.6573	4,994.6002	0.00	RP
1138	8,923.7503	5,013.5415	0.00	RP
1139	8,880.7203	5,039.0055	0.00	COMP
1140	9,046.0909	4,986.0695	0.00	RP
1141	9,885.8502	4,984.4898	0.00	RP
1142	9,972.8491	4,984.8398	0.00	RP
1143	10,277.1392	4,882.0502	0.00	RP
1144	10,364.2000	4,882.4188	0.00	RP
1145	10,585.7142	4,987.2898	0.00	RP
1146	10,673.7398	4,987.6398	0.00	RP
1147	10,781.9602	4,884.0702	0.00	RP
1148	10,865.3402	4,988.4098	0.00	RP
1149	10,952.3394	4,988.7498	0.00	RP
1150	10,864.9789	4,884.4002	0.00	RP
1151	12,267.6805	5,019.0096	0.00	RP
1152	12,392.9956	5,001.9674	0.00	RP
1153	12,292.1473	4,890.5974	0.00	RP
1154	12,373.2648	4,892.5573	0.00	RP
1155	10,651.2714	4,887.8164	79.65	CHK167
1156	10,651.1532	4,887.8088	79.69	CHK167
1157	11,748.1288	4,939.9352	0.00	COMP
1158	11,406.7015	4,938.5701	0.00	COMP
1159	11,747.9984	4,972.5349	1,078.10	COMP
1160	11,406.5712	4,971.1699	1,097.80	COMP
1161	11,406.8319	4,905.9704	1,097.80	COMP
1162	11,748.2591	4,907.3355	1,078.10	COMP
1163	11,723.0299	4,956.0959	1,090.95	CHKBM
1164	12,086.8448	4,901.1077	1,080.39	CHKHUB
1165	7,036.8453	4,871.0753	98.03	CHK18
1166	5,905.0841	5,041.0441	68.84	TEMP
1167	5,959.4353	4,958.0874	0.00	COMP
1168	5,987.3847	4,915.4279	0.00	COMP
1169	5,931.4859	5,000.7469	0.00	COMP
1170	11,297.8604	4,955.5697	0.00	INSTPT
1171	10,587.4114	4,935.3008	0.00	COMP
1172	11,337.4011	4,938.2904	0.00	COMP
1173	10,587.2719	4,970.3005	0.00	COMP
1174	10,587.5510	4,900.3011	0.00	COMP

1175	11,337.5411	4,903.2907	0.00	COMP
1176	11,337.2611	4,973.2901	0.00	COMP
1177	11,037.2684	4,972.0943	0.00	COMP
1178	11,037.5474	4,902.0948	0.00	COMP
1179	11,406.8380	4,905.9462	-6.82	CHK1161



HUMBOLDT, IOWA



HIGHWAY 169 BENCH MARK DATUM
USED FOR CONSTRUCTION 1977

B.M. NO. 3 – STA. 236+86.5 – 115.6' RT. CUT "X" ON TOP BOLT FIRE HYDRANT
ELEVATION 1137.35

B.M. NO. 4 – STA. 242+82.8 – 111' RT. CUT "X" ON TOP BOLT FIRE HYDRANT
ELEVATION 1133.49

B.M. NO. 5 – STA. 249+89.7 – 111.8' RT. CUT "X" ON TOP BOLT FIRE HYDRANT
ELEVATION 1135.02

B.M. NO. 6 – STA. 255+81 – 135' RT. SET RAILROAD SPIKE IN SOUTH SIDE LIGHT POLE
ELEVATION 1138.72

B.M. NO. 8 – STA. 262+26± RT. TOP CENTERLINE SOUTH END FUEL PUMP ISLAND AT HANDY SHOP
ELEVATION 1145.77 (RESET 1997)

B.M. NO. 9 – STA. 265+83 – 169' RT. CUT "X" ON TOP BOLT FIRE HYDRANT
ELEVATION 1146.48

B.M. NO. 10 – STA. 269+90 – 225' RT. CUT "X" ON TOP BOLT FIRE HYDRANT
ELEVATION 1144.39

B.M. NO. 11 – STA. 275+44.8 – 55' RT. CUT "X" ON TOP BOLT FIRE HYDRANT
ELEVATION 1133.38 (RESET 1997)

B.M. NO. 12 – STA. 280+53.3 – 15.9' LT. (GONE)

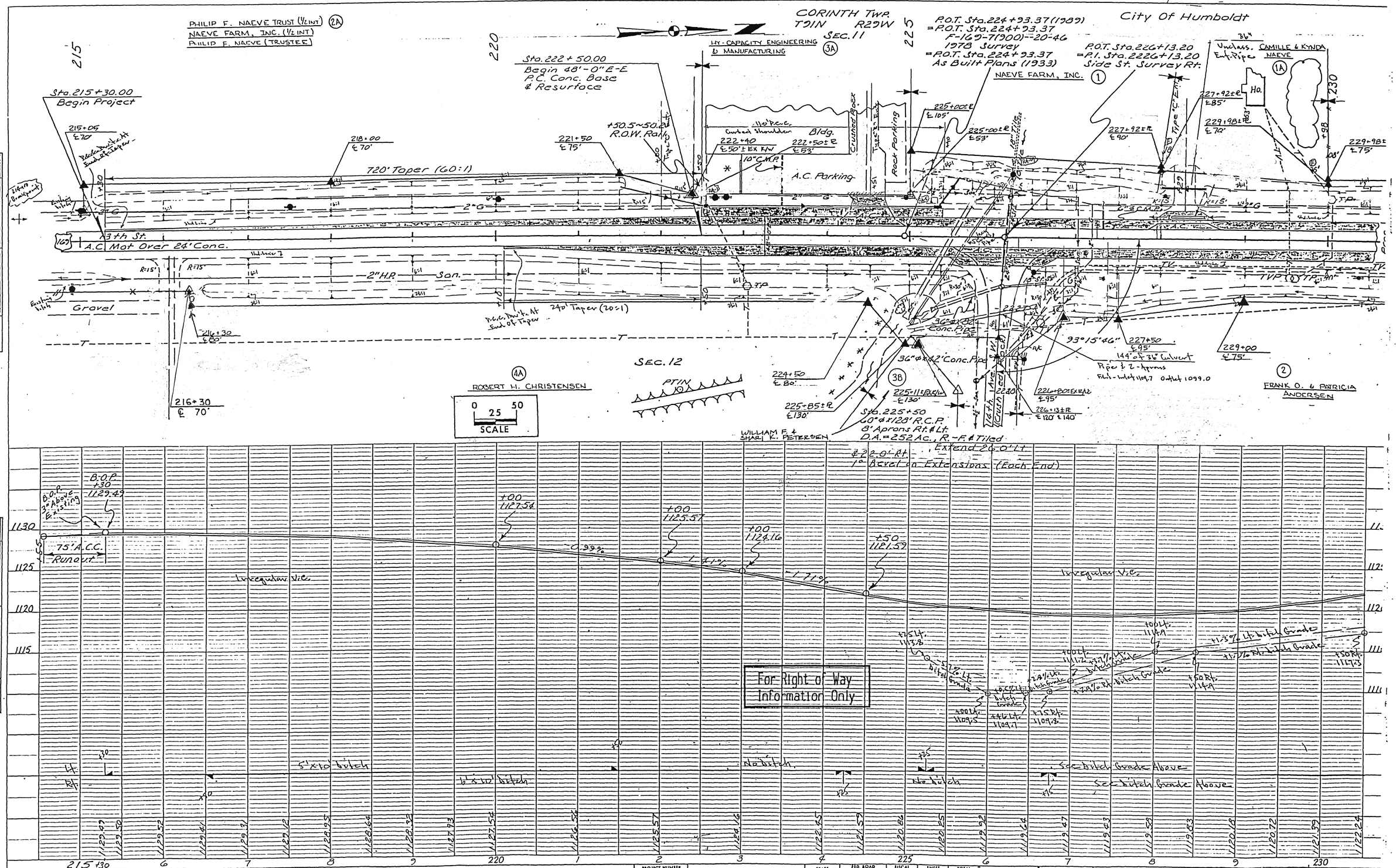
B.M. NO. 13 – STA. 283+36.4 – RT. (GONE)

B.M. NO. 14 – STA. 289+28 – 108' RT. SET RAILROAD SPIKE IN NORTH SIDE POWER POLE
ELEVATION 1078.65

B.M. NO. 13A STA. 283+50 – 102' RT. "□" CHIPPED ON SOUTHEAST CORNER CONCRETE VALVE PIT
ELEVATION 1071.88 (SET 1997)

B.M. NO. 13B STA. 283+67.3 - 29.9 RT. "□" CUT IN TOP NE ABUT WING
ELEVATION 1087.41

SEP 1 8 1997


PHILIP F. NAEVE TRUST (1/2 INT) 2A
NAEVE FARM, INC. (1/2 INT)
PHILIP F. NAEVE (TRUSTEE)
CORINTH TWP.
T91N R29W
SEC. 11
HY-CAPACITY ENGINEERING & MANUFACTURING 3A
City Of Humboldt
P.O.T. Sta. 224+93.37 (1989)
=P.O.T. Sta. 224+93.37
F-169-7(900)--20-46
1978 Survey
=P.O.T. Sta. 224+93.37
As Built Plans (1933)
P.O.T. Sta. 226+13.20
=P.I. Sta. 222G+13.20
Side St. Survey Rt.
NAEVE FARM, INC. 1
Unclass. Ext. Pipe
CAMILLE & KYNDA NAEVE 1A
Sta. 215+30.00
Begin Project
Sta. 222+50.00
Begin 48'-0" E-E
P.C. Conc. Base
& Resurface
720' Taper (60:1)
240' Taper (20:1)
13th St.
A.C. Mat Over 24' Conc.
Gravel
A.C. Parking
Rock Parking
Crushed Rock
Bldg.
10" C.M.P.
36" x 84' Conc. Pipe
36" x 42' Conc. Pipe
93°15'46"
144' of 36" Culvert
Pipe & 2-Aprons
Elev. - Inlet 1109.7 Outlet 1099.0
Sta. 225+50
10' x 128' R.C.P.
8' Aprons Rt. & Lt.
D.A. = 252 Ac., R.-F. & Tiled
Extend 26.0' Lt.
& 22.0' Rt.
1:6 Bevel on Extensions (Each End)
ROBERT H. CHRISTENSEN 4A
WILLIAM F. & SHARI K. PETERSEN 3B
FRANK O. & PATRICIA ANDERSEN 2
SEC. 12
PTIN
SCALE 0 25 50
B.O.P. +30 1129.49
75' A.C.C. Runout
Irregular V.C.
Six inch bitch
No bitch
See bitch Grade Above
For Right-of-Way Information Only
HUMBOLDT COUNTY
PROJECT NUMBER
NHS-F-169-7(35)--19-46
STATE IOWA
FED. ROAD DIST. NO. 8
FISCAL YEAR
SHEET NO. H.D.1
TOTAL SHEETS

SEP J 8 1992

REV	6-6-94	PR	1

CORINTH TWP.
T91N R29W
SEC. 11
CITY OF HUMBOLDT

NAEVE FARM, INC.
①

MARLYS J. JOHNSON &
ROBERT E. KIRCHOFF
③

② FRANK O. & PATRICIA ANDERSEN

P.I. Sta. 235+58.20

Sta. 237+57.50
Begin 51'-0" E-B
P.C. Conc. Base
& Resurface
(24'-0" Lt. & 27'-0" Rt.)

Sta. 244 + 50.00
Begin 54'-0" B.-B.
P.C. Conc. Base
& Resurface

Humboldt Care Center

229+98±R
℄ 70'

224+98±R
℄ 75'

PU 232+58.20
℄ 75'

235+58±R
℄ 90'

236+50
℄ 75'

P.O.T. Sta. 236+13.30

P.O.C. Sta. 237+13.30

PT 238+58.20
℄ 75'

243+50
℄ 75'

P.O.T. Sta. 242+86.76

244+41±R
℄ 80'

150' Taper (60:1)
150' Foreclose Transition
From 65:1 to 30:1

Approx. Location of Tile

Type "C" E+ +50

Ho.

230 235 240 245

13th St.

A.C. over 24" Conc.

T.V. Ped. Tel. Pedestal

P.L. 232+58.20
℄ 75'

232+90
℄ 50' ± Ex R/W

P.C. Sta. 232+58

DO NOT DISTURB TREES

Club

Ho.

Oak Ave.

4" Pines

Type "C"

Light

110' P.C.C. Curbed Shoulder
235+58 ± Ex R/W
℄ 55'

Ent.

20' Conc.

Ho.

Parking

S.W. 13th St.
A.C.

Taper 2.5' P.C.C. Curb & Gutter Unit to 1.5' Turn Radius.

R.T. Sta. 238

S.W. 10th Ave.

B.B.

66' R.O.W.

Δ = 0°20'18" Rt.
D = 0°03'23"
T = 300.00'
L = 600.00'
E = 0.44'
R = 101,608.28'

Sec. 12

0 50
SCALE

Oak Hill Baptist Church

2.5' P.C.C. Curb & Gutter Unit

6" C.M.P.

Gas Req.

2.5' P.C.C. Curb & Gutter Unit

24" x 36" Corr. Pipe

S.W. 13th Street
A/C.

8" San.

S.W. 9th Ave.

+90.8 - 115.9' Rt.
Lot Cor.
Iron Pin

Ent.

Ho.

66' R.O.W.

Irregular v.c.

+00 1126.16

+00 1133.63

+00 1133.36

+50 Lt. 1131.1

+00 1127.88

+50 Lt. 1130.18

+00 Lt. 1129.6

+08.5 Lt. 1128.3

+00 Lt. 1124.40

+50 Lt. 1123.5

+50 Lt. 1119.5

+50 Rt. 1120.5

+50 Rt. 1117.5

+50 Rt. 1117.5

+50 Lt. 1119.5

+1.23% Lt. Ditch Grade

+1.14% Lt. Ditch Grade

+1.00% Lt. Ditch Grade

+1.30% Lt. Ditch Grade

+1.20% Lt. Ditch Grade

+2.62% Rt. Ditch Grade

+1.22% Rt. Ditch Grade

+50 Rt. 1117.5

See Ditch Grade Above

See Ditch Grade Above

See Ditch Grade Above

No Ditch

4'x16' Ditch

-0.81%

-1.20% Lt. Ditch Grade

+1.4% Lt. Ditch Grade

For Right of Way
Information Only

1130
1125
1120
1115

Lt.
Rt.

1120.77 1121.39 1122.24 1122.74 1123.33 1123.57 1127.88 1130.12 1132.36 1133.33 1134.21 1135.05 1135.48 1136.20 1136.55 1136.71 1136.82 1136.81 1136.68 1136.43 1136.08 1135.75 1134.45 1133.63 1133.32 1133.11 1133.20

230 1 2 3 4 235 6 7 8 9 240 1 2 3 4 245

HUMBOLDT COUNTY	PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NHS-F-169-7(35)- -19-46	IOWA	5		H.02	

01

02

A JOINT ENTRANCE IS POSSIBLE BETWEEN PARCELS 7 & 8 IF (1) BOTH PARTIES AGREE AND (2) STORM SEWER & INTAKES CAN BE ADJUSTED BY ROAD DESIGN

CORINTH TWP.
T91N R29W
SEC. 11

CITY OF HUMBOLDT

School Yard

HUMBOLDT QUALITY SMITH, INC.
Humboldt Health Care Center

ROBERT A. THOMAS + HARRIET P. THOMAS

EDWARD CLARKEN + DONNA J CLARKEN

JAMES RIPPEE + ELANORA E. RIPPEE

Colonial Ho Apts

Pot Shop

Parking

City Park

POT Sta 256+13.29
= PT Sta 2256+13.29
Side Street Survey

Sta. 256+00.00
End P.C.C. Base & R. surface
Begin reconstruction

EXIST R/W AQUIRED BY EASEMENT IN 1931

13th St
A.C. Overlay Conc.

SW 13th St

City Park

SEC 12

Sta. 255+37.5
24"x57' Conc Pipe
DA = 14 Ac F

SUMMER AVE.

Car Wash

Oil Station

Filler Pipes

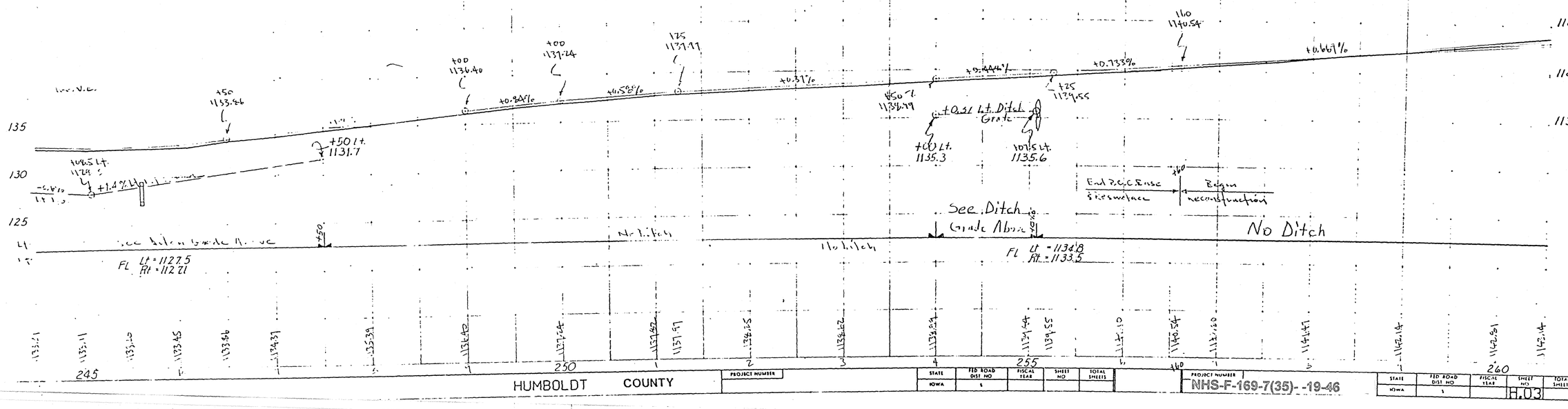
WESSELS OIL Co.

Δ = 0°34'00" Rt
D = 0°05'40"
T = 300.00'
L = 600.00'
E = 0.74'
R = 60,666.12'

LEGEND
-T- NW Bell Tel Co
-10- Public Service

SCALE 0 25 50

For Right of Way Information Only



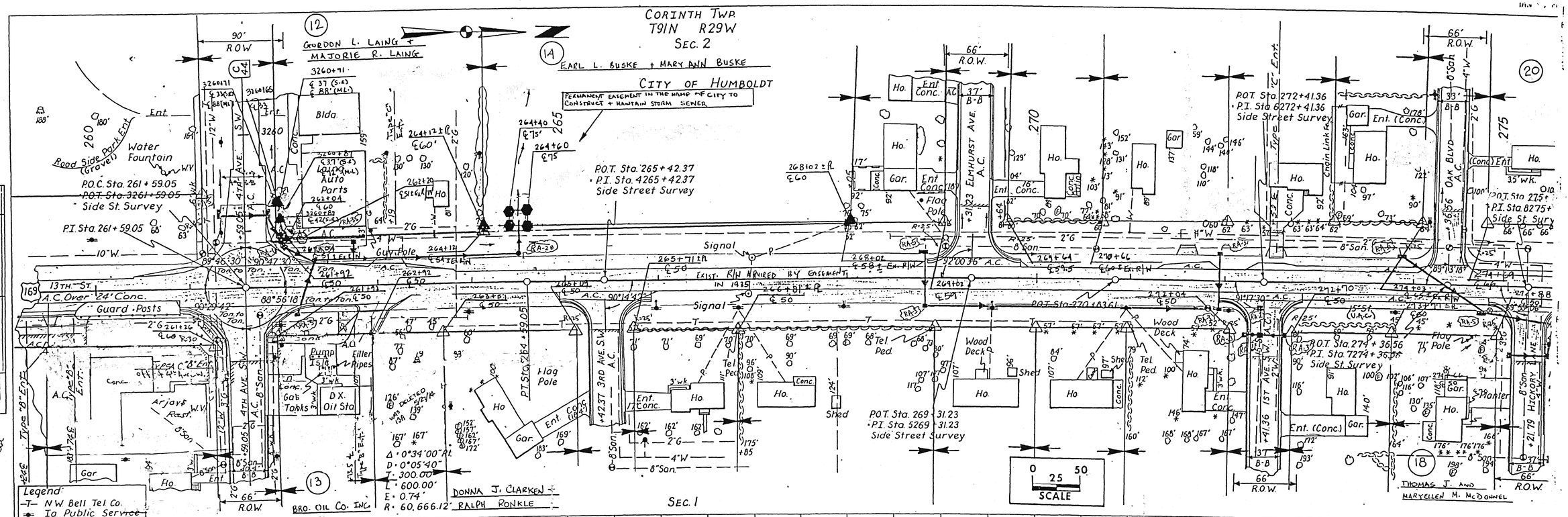
HUMBOLDT COUNTY

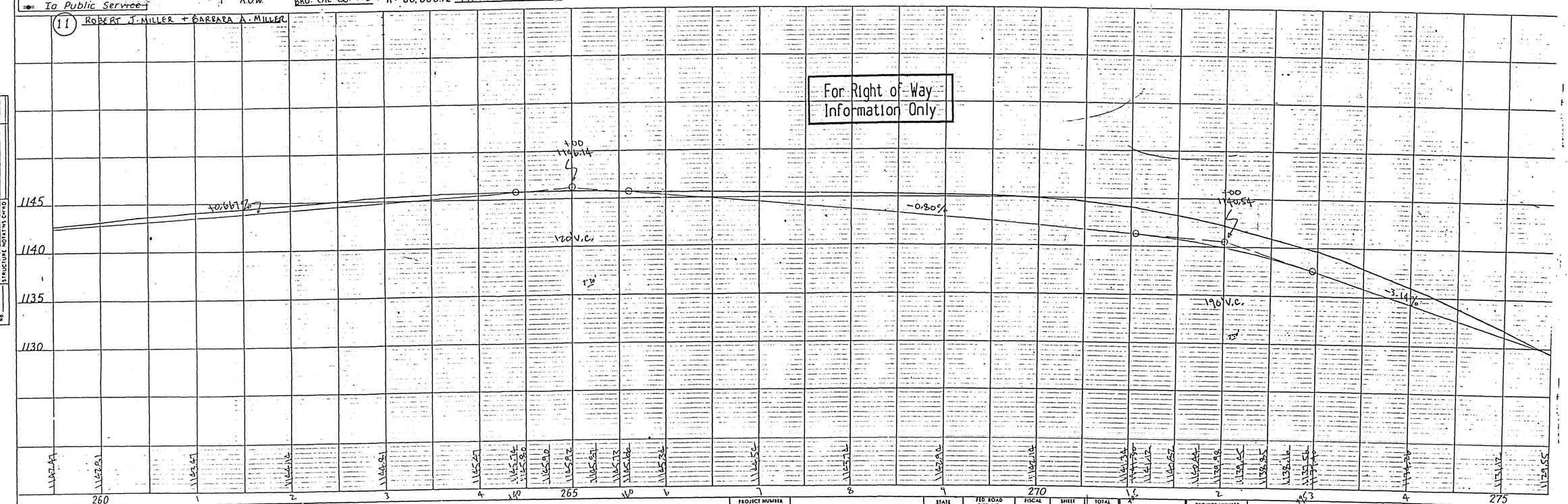
PROJECT NUMBER	STATE	FED ROAD DIST NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER NHS-F-169-7(35)--19-46

STATE	FED ROAD DIST NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
IOWA	5		H.03	

D1



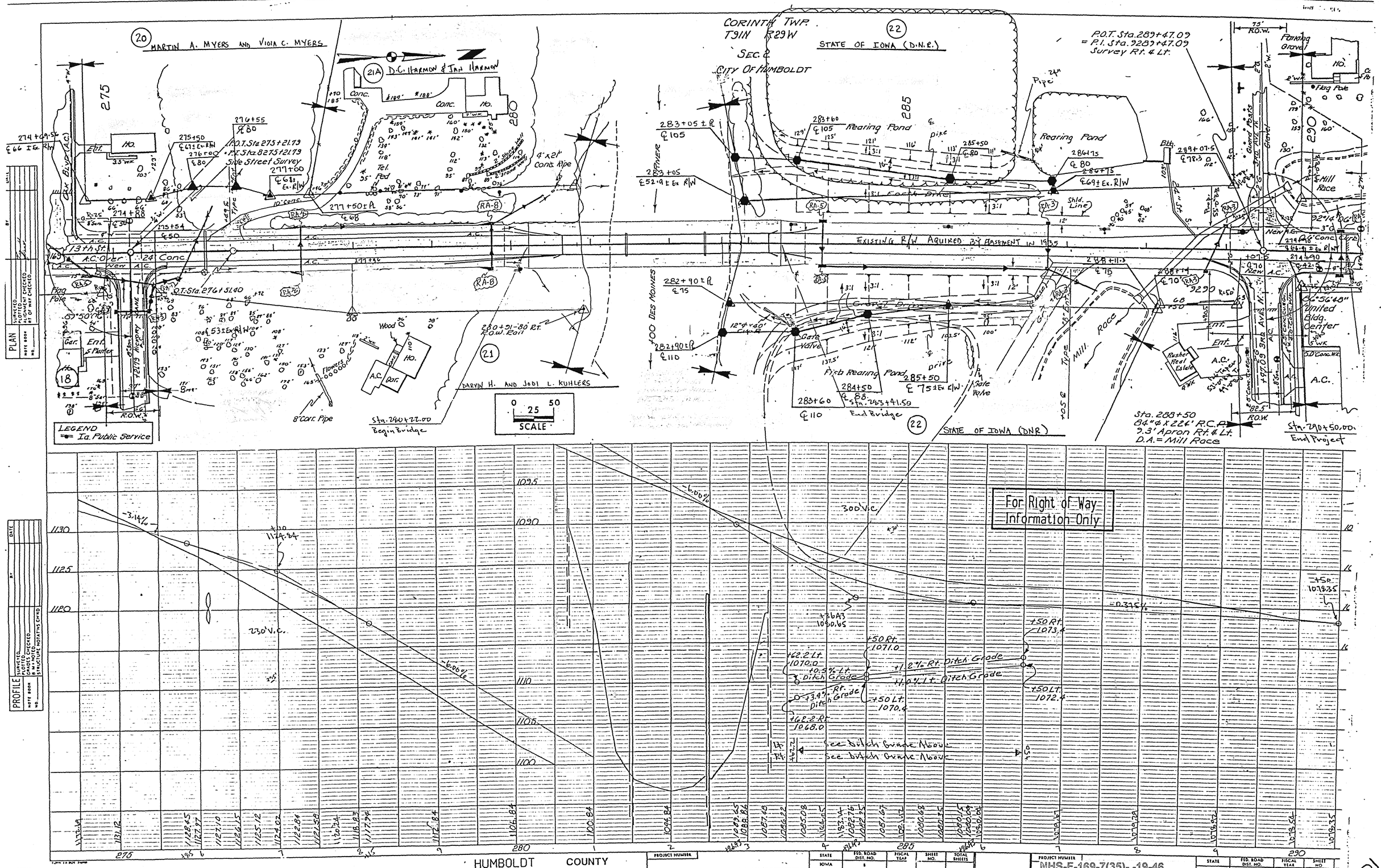


HUMBOLDT COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.
NHS-F-169-7(35)--19-46	IOWA	5		H.04

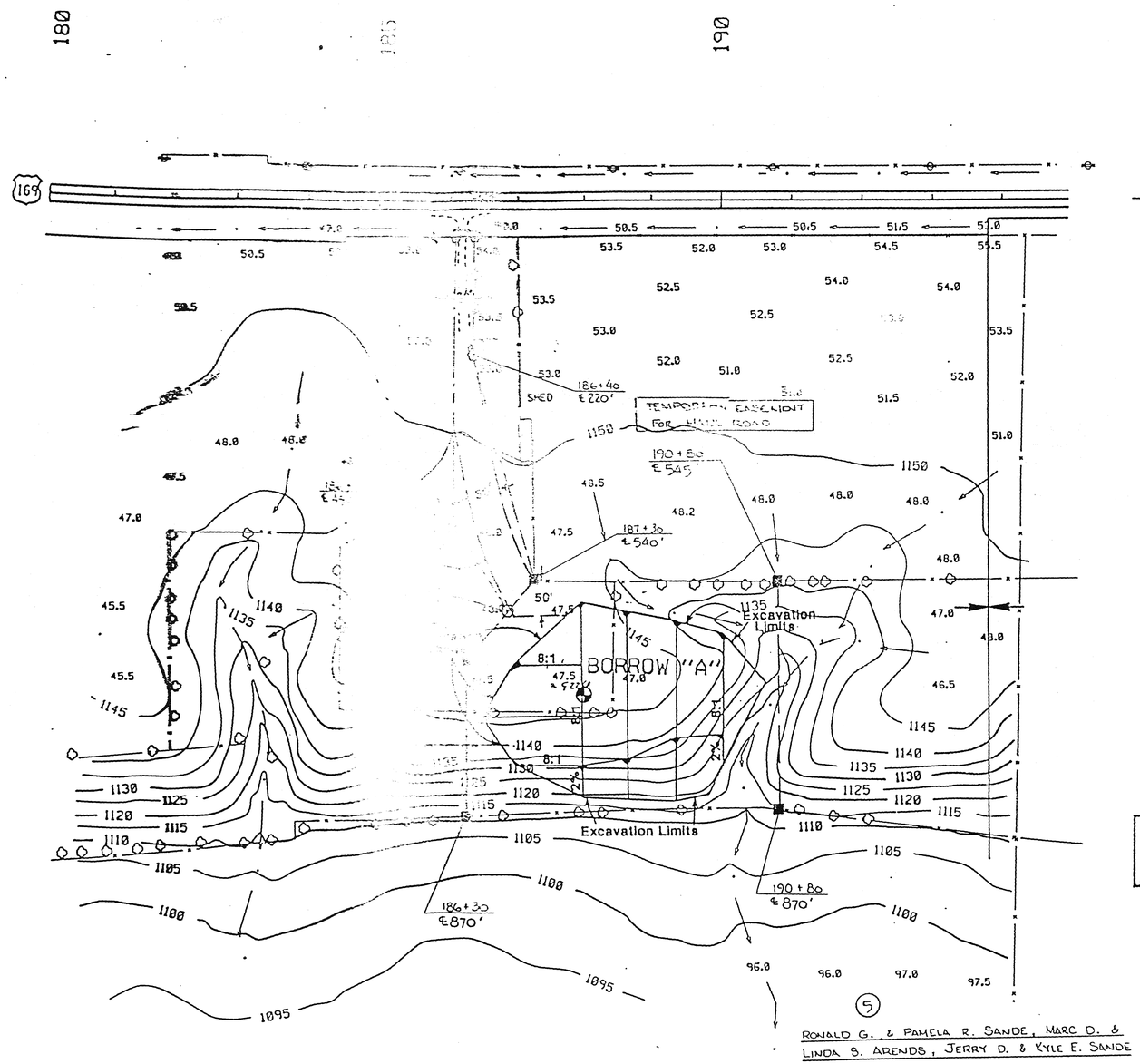
D1


MARTIN A. MYERS AND VIOLA C. MYERS
D.C. HARMON & JAN HARMON
CORINTH TWP.
T91N R29W
SEC. 2
CITY OF HUMBOLDT
STATE OF IOWA (D.N.R.)
DARVIN H. AND JODI L. KUHLERS
STATE OF IOWA (DNR)
P.O.T. Sta. 289+47.09
= P.I. Sta. 9289+47.09
Survey Rt. & Lt.
P.O.T. Sta. 275+21.79
= P.I. Sta. 8275+21.79
Side Street Survey
Rearing Pond
Fish Rearing Pond
Mill Race
Existing R/W Aquired by Easement in 1935
Sta. 280+22.00
Begin Bridge
Sta. 285+41.50
End Bridge
Sta. 288+50
84"Φ x 226' R.C.P.
3.3' Apron Rt. & Lt.
D.A. = Mill Race
Sta. 290+50.00
End Project
United Bldg. Center
Parking Grove
LEGEND
Ia. Public Service
SCALE
0 25 50
For Right of Way Information Only
-3.14%
-6.00%
-0.39%
300' V.C.
230' V.C.
+50 Rt. 1073.4
+50 Rt. 1071.0
+50 Lt. 1072.4
+50 Lt. 1070.4
+162.2 Lt. 1070.0
+162.2 Rt. 1068.0
+0.5% Lt. Ditch Grade
+1.2% Rt. Ditch Grade
+1.0% Lt. Ditch Grade
-13.4% Rt. Ditch Grade
See Ditch Grade Above
HUMBOLDT COUNTY
PROJECT NUMBER
NHS-F-169-7(35)--19-46
STATE IOWA
FED. ROAD DIST. NO. 8
FISCAL YEAR
SHEET NO. H.05

OCT 26 1992

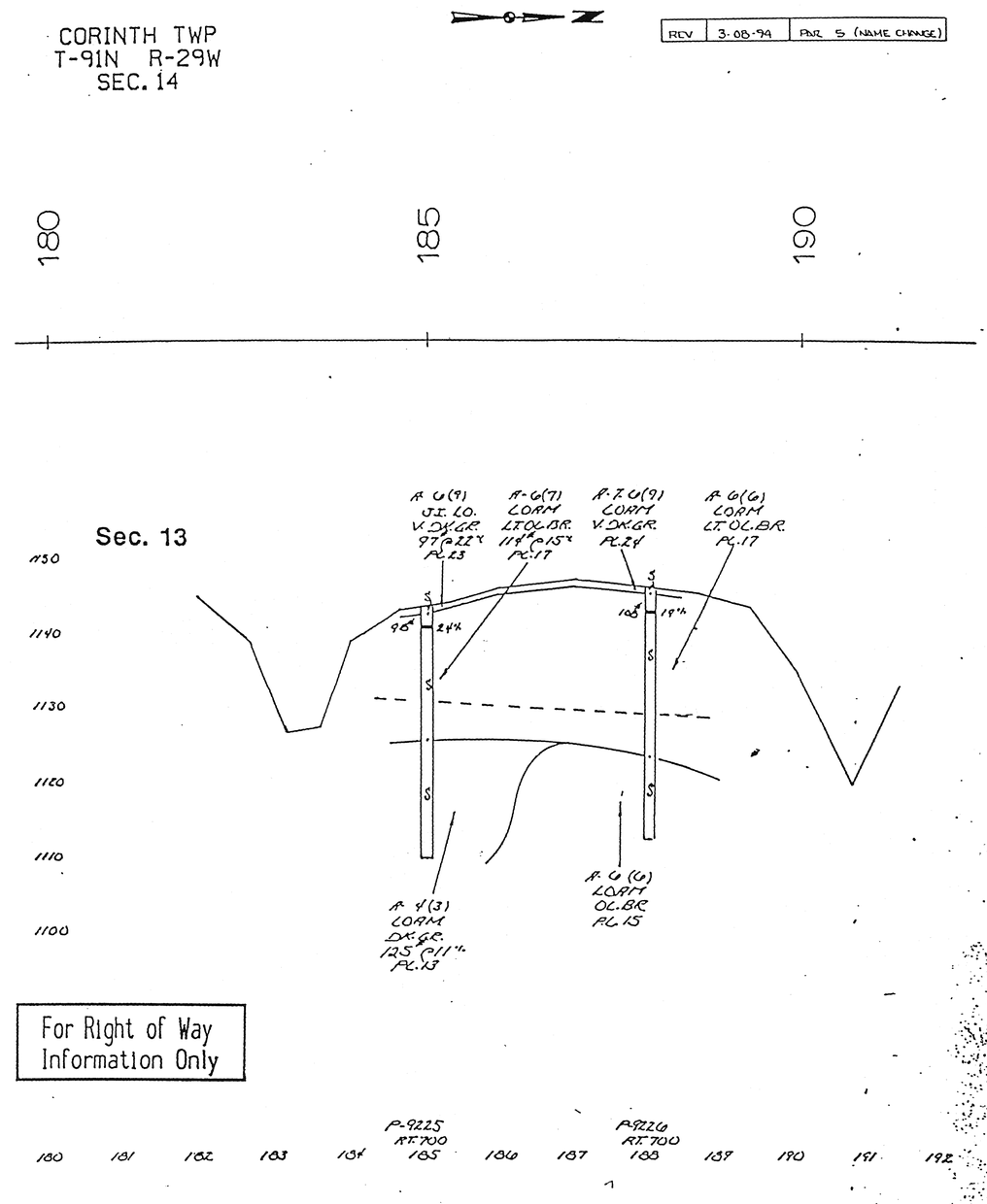
CORINTH TWP
T-91N R-29W
SEC. 14

REV	3-08-94	PAR 5 (NAME CHANGE)



5

RONALD G. & PAMELA R. SANDE, MARC D. & LINDA S. ARENDS, JERRY D. & KYLE E. SANDE



For Right of Way
Information Only

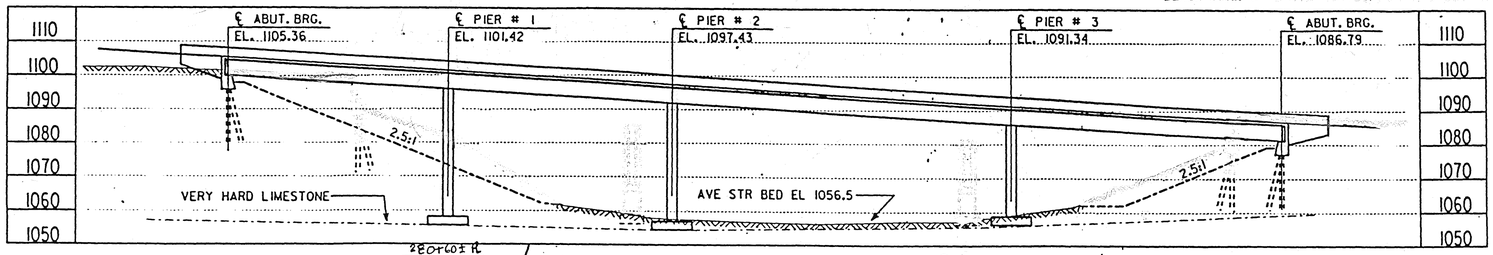
0 100
SCALE

	Material Available	Material Needed
Topsiol	-----	-----
Class 10	28,778 Cu. Yds.	21,800 Cu. Yds.
Select	-----	-----
Total	28,778 Cu. Yds.	21,800 Cu. Yds.

BORROW "A"
Rt. Sta. 186+53.00 to Sta. 190+65.00

COUNTY	PROJECT NUMBER	SHEET NUMBER
	NHS-F-169-7(35)- -19-46	H.06

BENCH MARK #



LONGITUDINAL SECTION ALONG ℄ ROADWAY

0 20
SCALE IN FEET

PROFILE

-6.00% -0.40%

PI STA 284+36.43 VC = 300'
PI ELEV 1080.65

PROPOSED GRADE ON US #169

HYDRAULIC DATA

DRAINAGE AREA= 2256 SQ MILES
STREAM SLOPE= 2.64 FT./MI.

Q50= 16,900 CFS
NATURAL STAGE= 1073.1

Q100 = 19,400 CFS
NATURAL STAGE= 1074.1

Q500= 25,690 CFS
STAGE W/BACKWATER= 1176.8

EXTREME HW STAGE= 1073.9
DATE= APRIL 14,1969

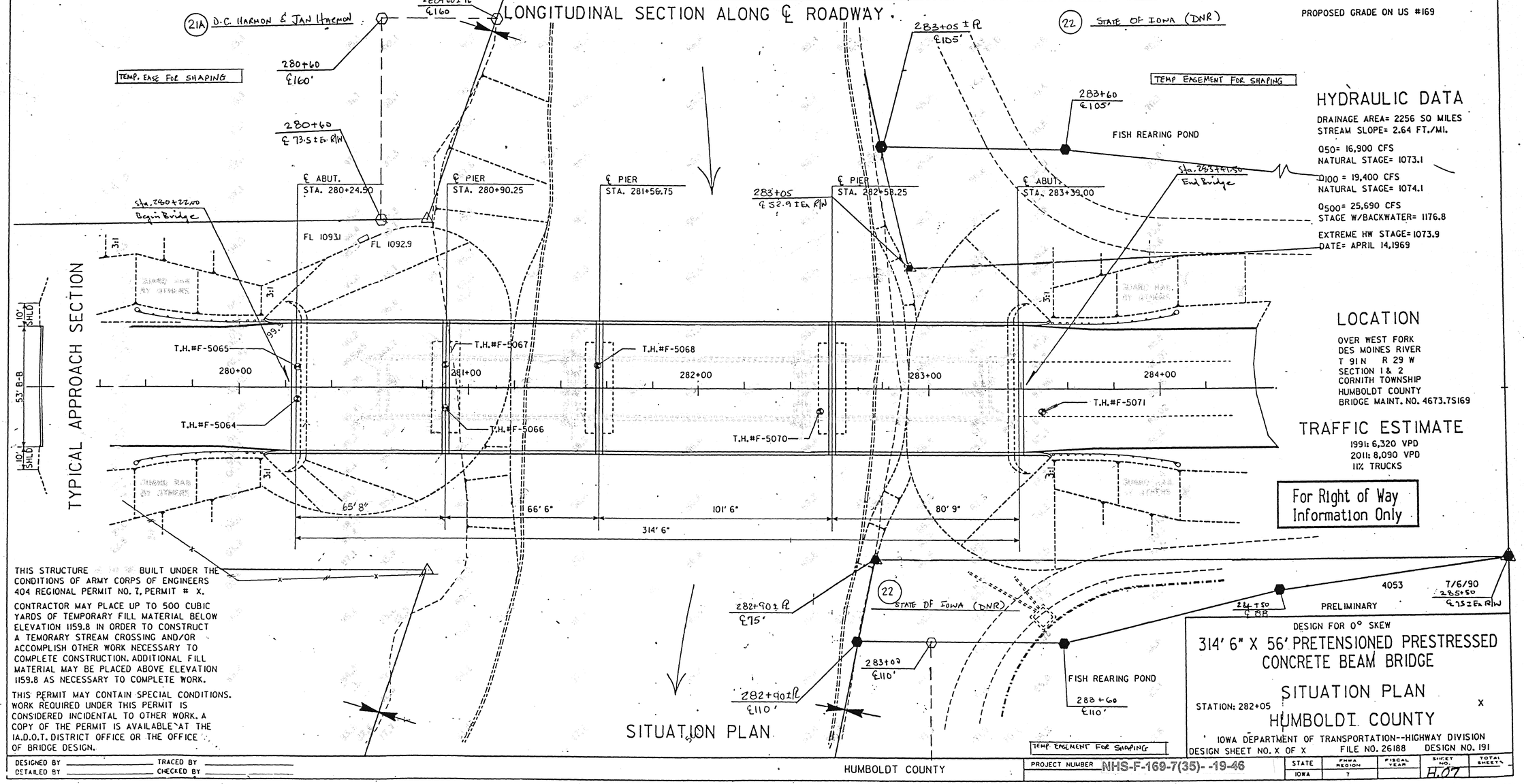
LOCATION

OVER WEST FORK
DES MOINES RIVER
T 91 N R 29 W
SECTION 1 & 2
CORNITH TOWNSHIP
HUMBOLDT COUNTY
BRIDGE MAINT. NO. 4673.7S169

TRAFFIC ESTIMATE

1991: 6,320 VPD
2011: 8,090 VPD
11% TRUCKS

For Right of Way Information Only



SITUATION PLAN

THIS STRUCTURE BUILT UNDER THE CONDITIONS OF ARMY CORPS OF ENGINEERS 404 REGIONAL PERMIT NO. 7, PERMIT # X.

CONTRACTOR MAY PLACE UP TO 500 CUBIC YARDS OF TEMPORARY FILL MATERIAL BELOW ELEVATION 1159.8 IN ORDER TO CONSTRUCT A TEMORARY STREAM CROSSING AND/OR ACCOMPLISH OTHER WORK NECESSARY TO COMPLETE CONSTRUCTION. ADDITIONAL FILL MATERIAL MAY BE PLACED ABOVE ELEVATION 1159.8 AS NECESSARY TO COMPLETE WORK.

THIS PERMIT MAY CONTAIN SPECIAL CONDITIONS. WORK REQUIRED UNDER THIS PERMIT IS CONSIDERED INCIDENTAL TO OTHER WORK. A COPY OF THE PERMIT IS AVAILABLE AT THE IA.D.O.T. DISTRICT OFFICE OR THE OFFICE OF BRIDGE DESIGN.

DESIGN FOR 0° SKEW

314' 6" X 56' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

SITUATION PLAN

STATION: 282+05 X

HUMBOLDT COUNTY

IOWA DEPARTMENT OF TRANSPORTATION--HIGHWAY DIVISION

DESIGN SHEET NO. X OF X FILE NO. 26188 DESIGN NO. 191

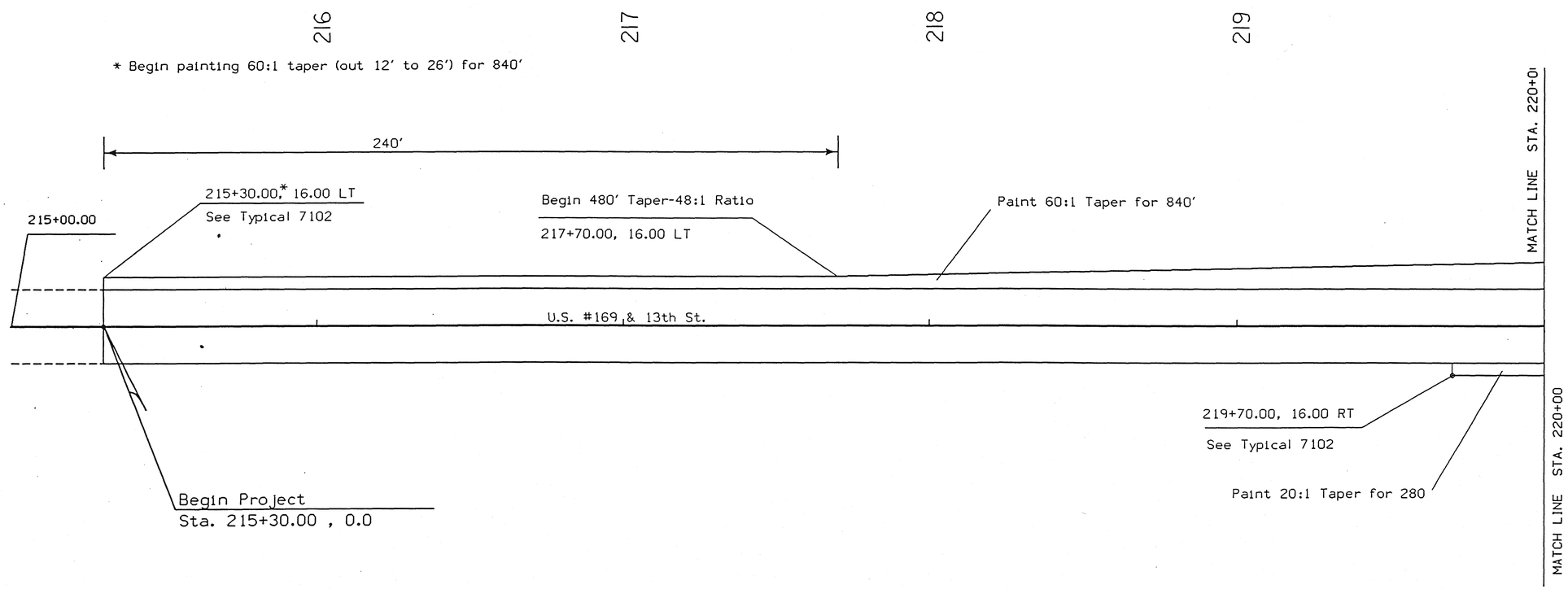
DESIGNED BY _____ TRACED BY _____
DETAILED BY _____ CHECKED BY _____

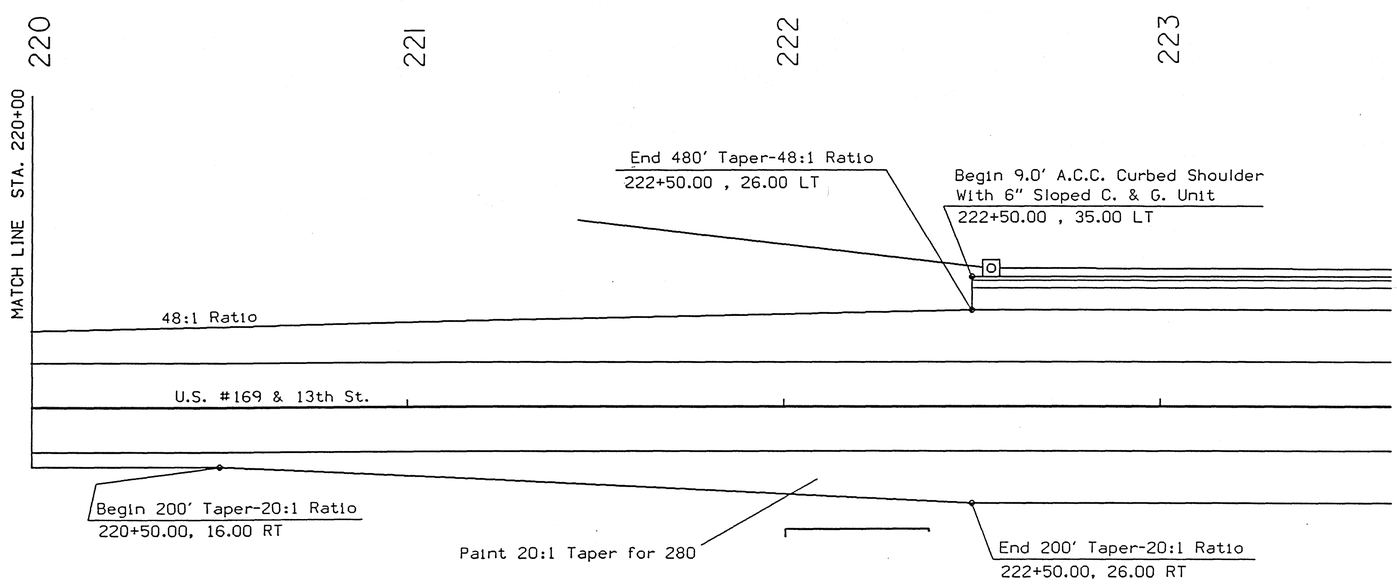
HUMBOLDT COUNTY

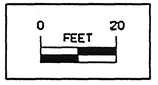
PROJECT NUMBER NHS-F-169-7(35)- -19-46

STATE	FHWA REGION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	7		H.07	

D1







GEOMETRIC DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER L.01

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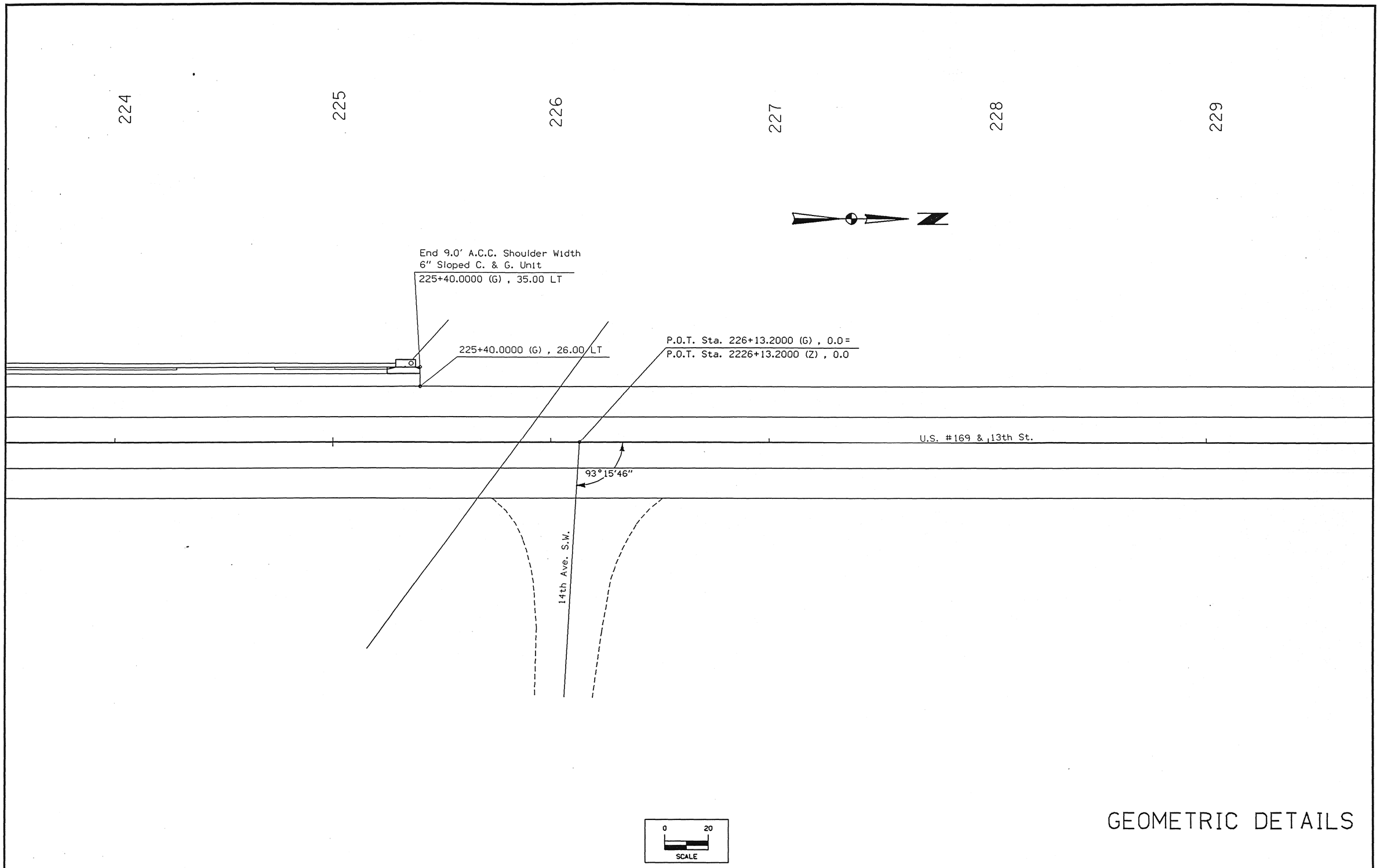
01

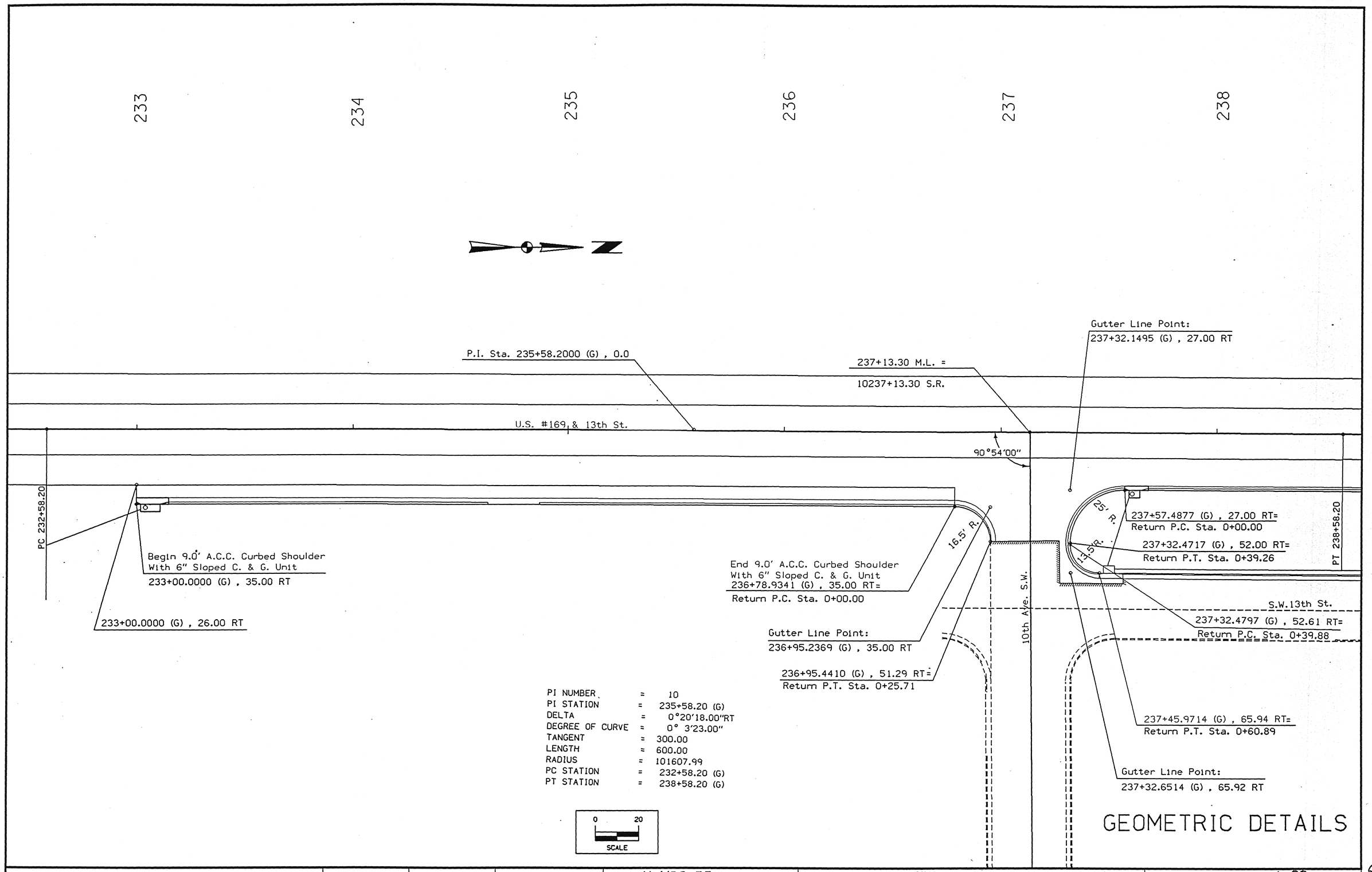


GEOMETRIC DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	L.02

8-OCT-1996 08:58 kjander /usr/svr1/usr4/ord/4a/k46169027.102

D1



OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	L.03

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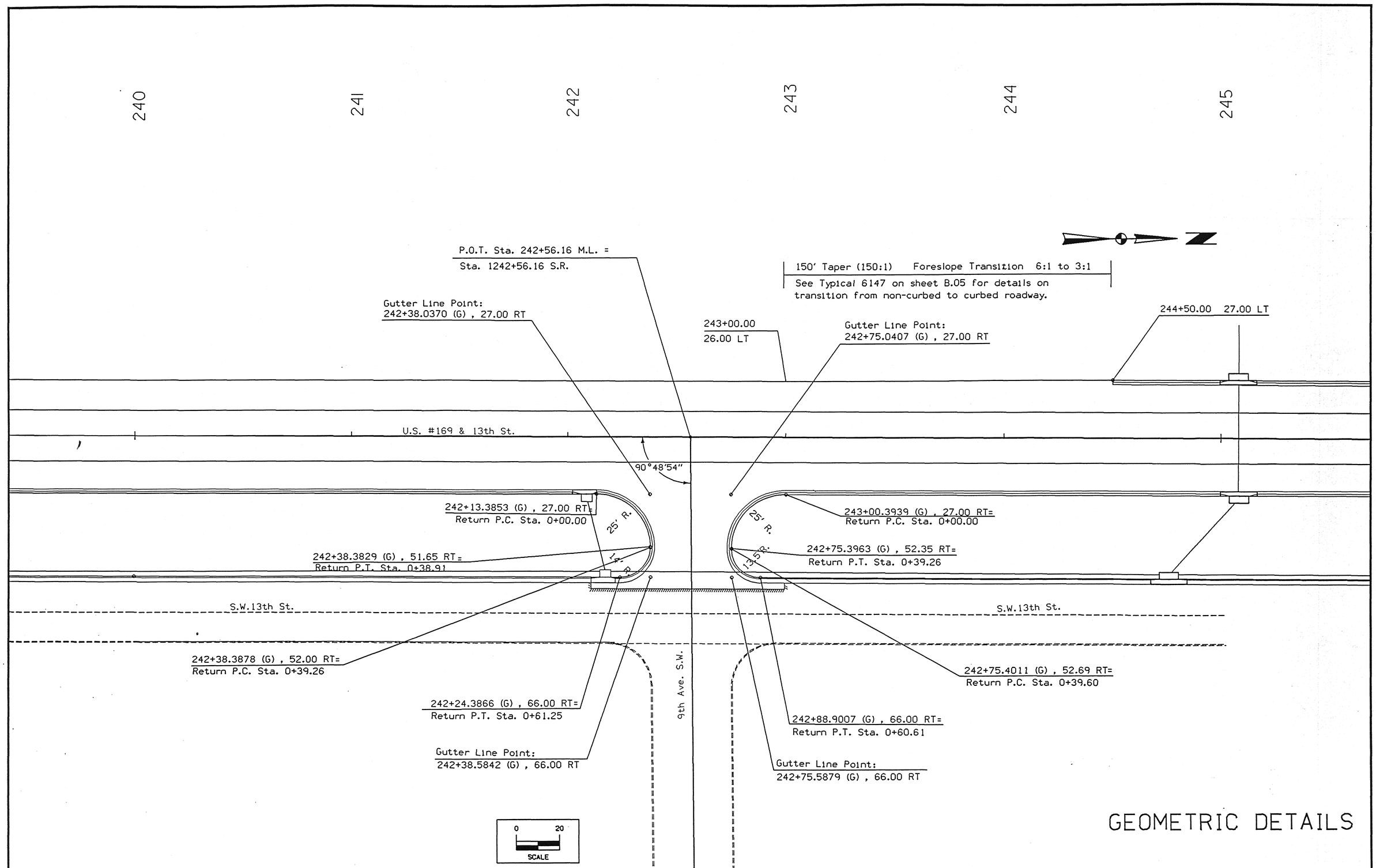

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	L.04

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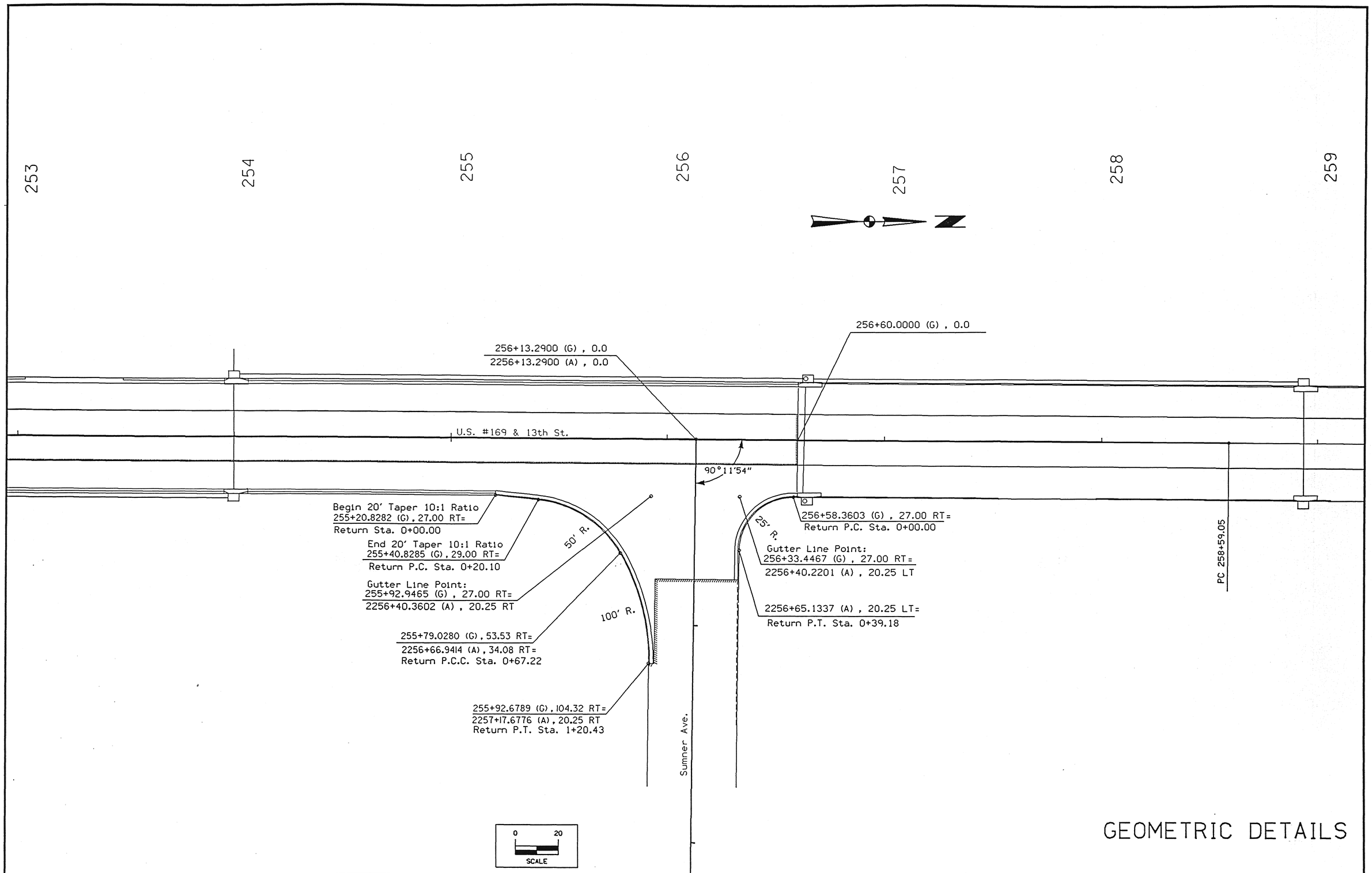
D1



GEOMETRIC DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	L.05

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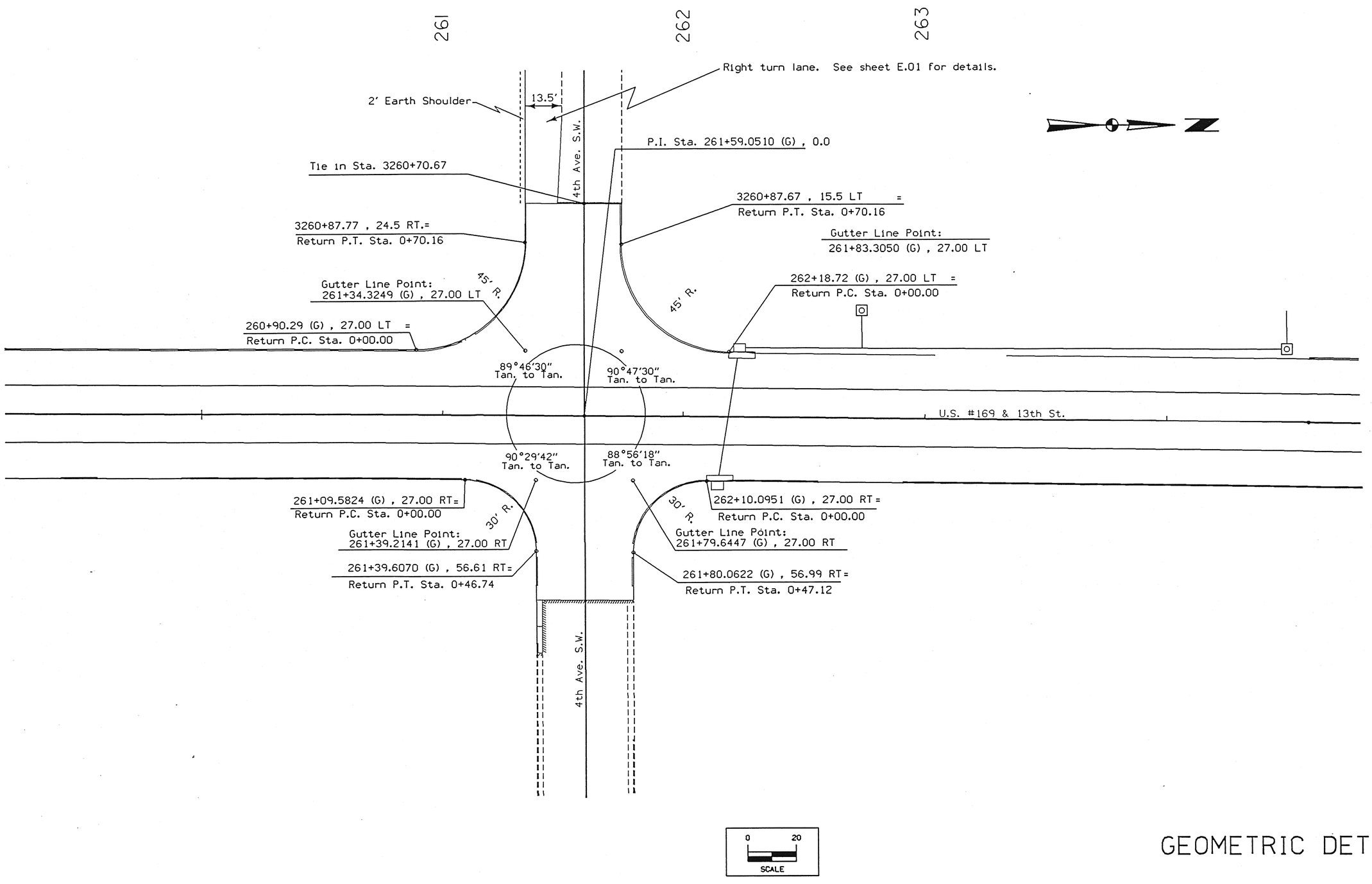
D1



GEOMETRIC DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER L.06

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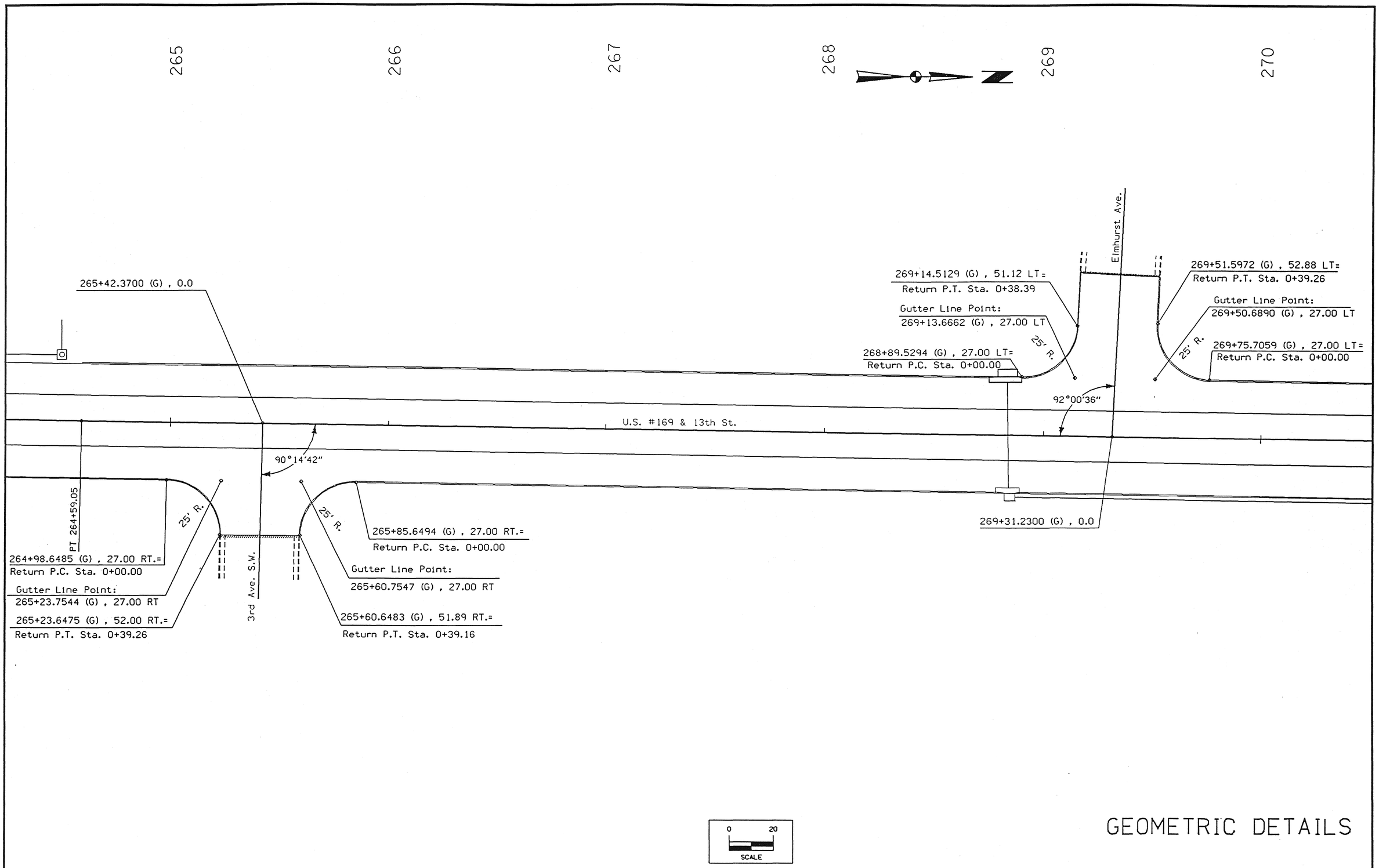
01



GEOMETRIC DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	L.07

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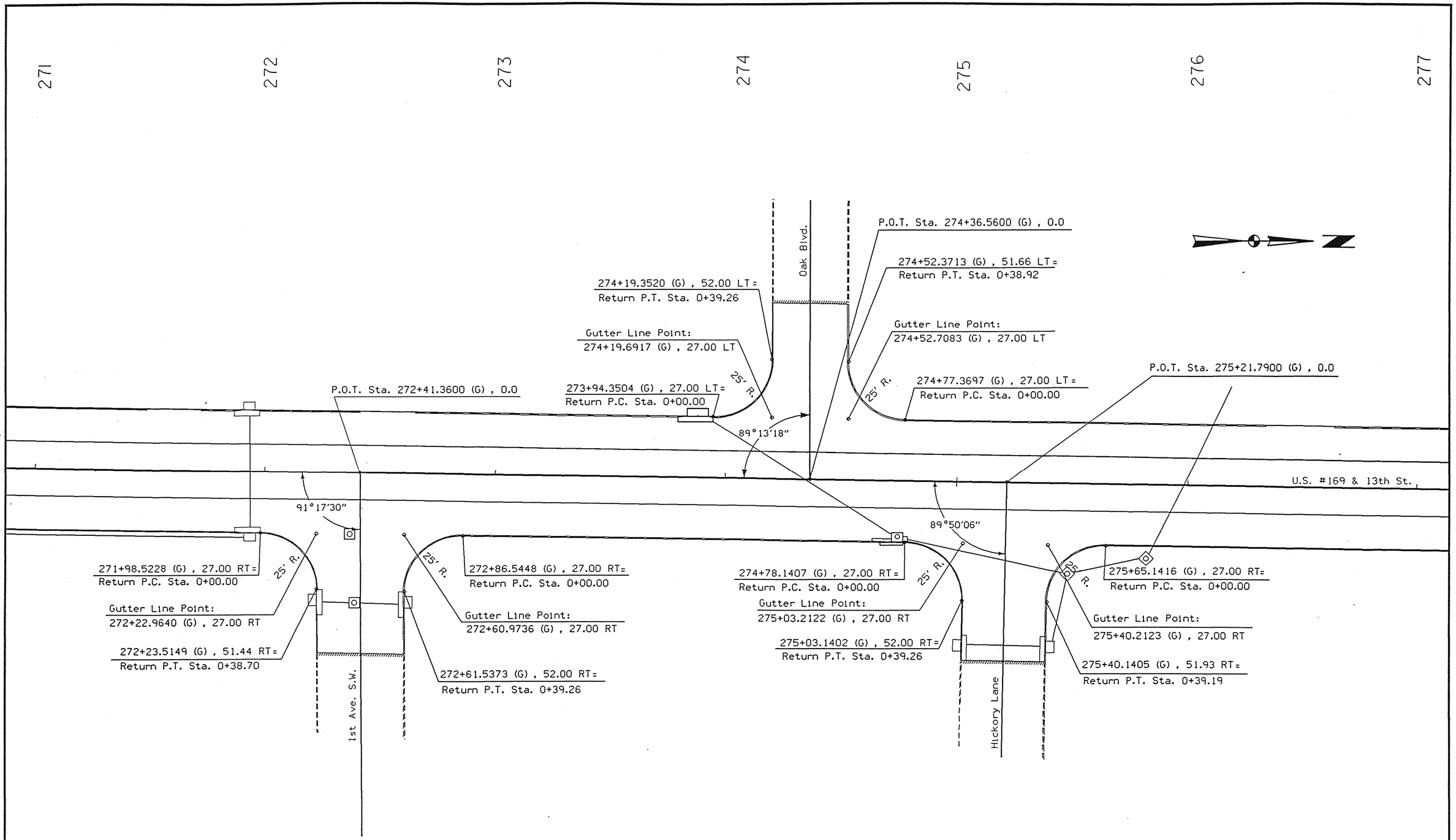
10



GEOMETRIC DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	L.08

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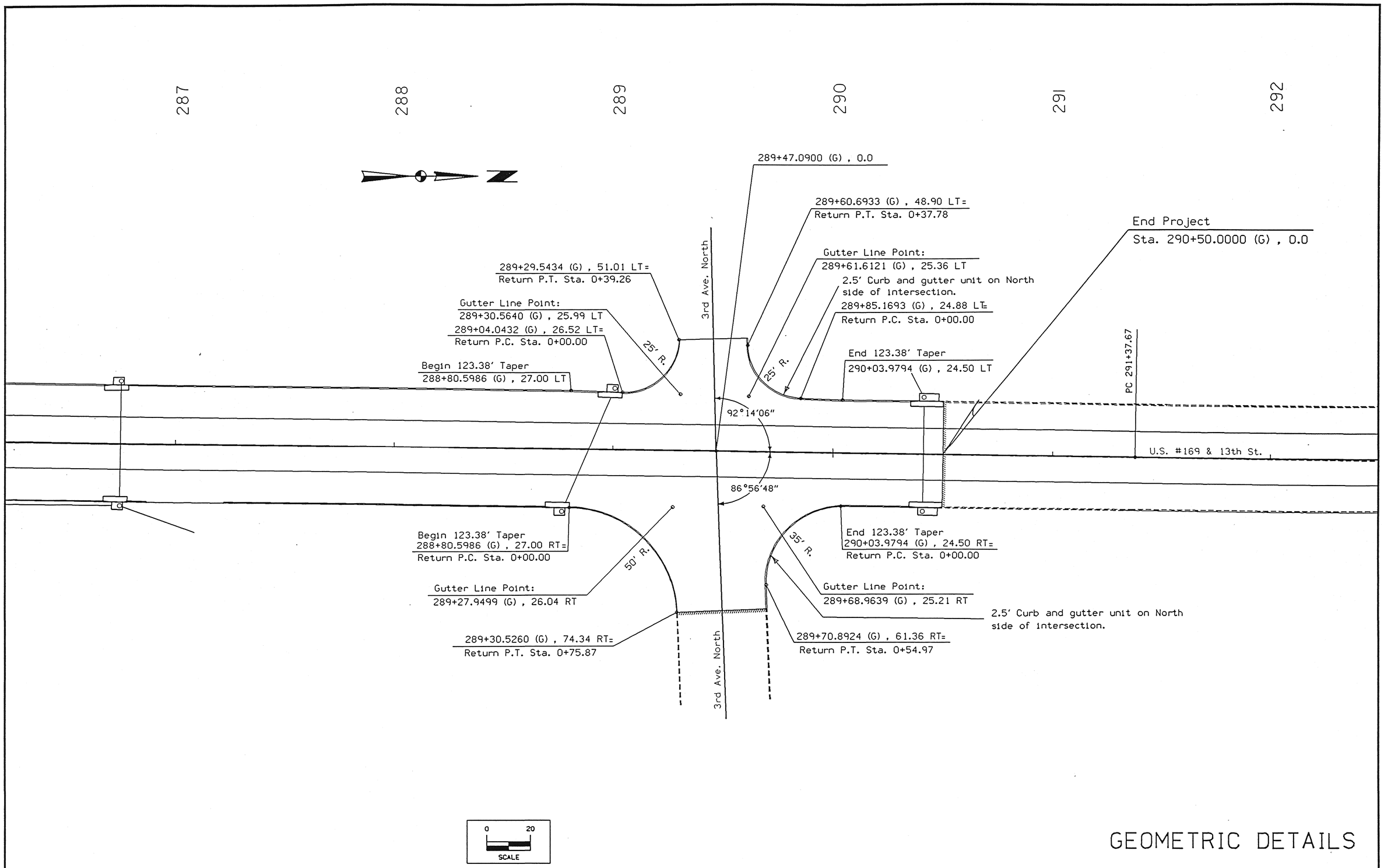

GEOMETRIC DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER L.09

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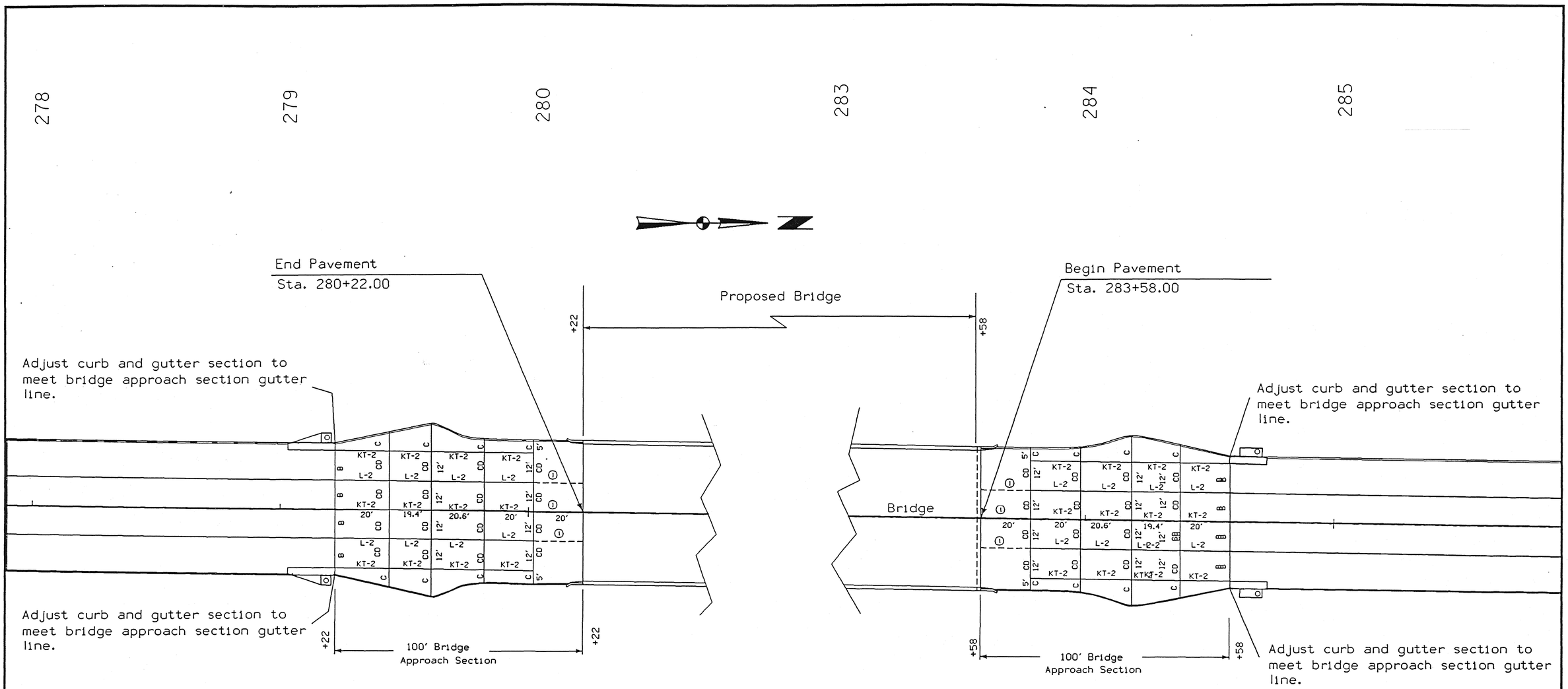
D1



① Longitudinal Joint
Single pour - no joint.
Two pours - use 'KS' joint.

For additional information see sheet U.01.

0 20
SCALE

JOINTING DETAILS

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	L.10

8-OCT-1996 09:04 kjander /usr/svr1/usr4/ord/4a/k46169027.118

D1

LIST OF INTAKES AND UTILITY ACCESSES

104-5A
06-15-93

NUMBER	LOCATION	TYPE OR STANDARD ROAD PLAN	FORM GRADE Elev.	BOTTOM WELL Elev.	NOTE
58	222+55.0 - 35' Lt.	RA-1	23.74	18.70	1
59	225+33.5 - 35' Lt.	RA-5	19.39	13.15	1
60	226+23.0 - 76.0' Lt.	Mod.RA-1	09.60	04.90	8
2	233+06.5 - 35.0' Rt.	RA-5	26.97	22.97	
1	237+62.1 - 27.0' Rt.	RA-3	35.57	31.35	
3	237+51.0 - 66.0' Rt.	RA-3	34.90	30.90	
4	242+08.9 - 27.0' Rt.	RA-3	34.45	30.45	
41	242+17.5 - 66.0' Rt.	RA-3	32.47	28.25	1
7	244+76.0 - 66.0' Rt.	RA-5	26.80	20.80	1, 2
5	245+08.5 - 27.0' Lt.	RA-5	32.30	26.45	11
6	245+08.5 - 27.0' Rt.	RA-5	32.30	23.70	11
18	258+93.5 - 27.0' Rt.	RA-3	41.37	37.37	
19	258+93.5 - 27.0' Lt.	RA-3	41.37	37.37	
17	256+64.5 - 27.0' Lt.	RA-3	39.84	35.84	1
16	256+64.5 - 27.0' Rt.	RA-3	39.84	35.84	
13	254+00.0 - 27.0' Lt.	RA-3	38.26	33.95	1
12	254+00.0 - 27.0' Rt.	RA-3	38.26	33.35	
11	251+00.0 - 27.0' Rt.	RA-3	37.09	31.40	1, 11
43	250+56.0 - 46.5' Lt.	RA-35	36.30	32.30	
10	251+00.0 - 27.0' Lt.	RA-3	37.09	32.00	1, 11
44	250+13.0 - 65.5' Rt.	RA-3	32.00	28.00	
45	247+64.5 - 66.0' Rt.	RA-3	32.45	26.70	1
42	248+50.0 - 60.0' Lt.	RA-35	32.50	28.50	
8	247+64.5 - 27.0' Lt.	RA-3	34.30	29.00	1
9	247+64.5 - 27.0' Rt.	RA-3	34.30	27.90	
21	262+22.72 - 27.0' Lt.	RA-3	43.56	39.56	1
20	262+14.9 - 27.0 Rt.	RA-3	43.51	39.51	
47	264+50.0 - 30.5' Lt.	RA-2	45.71	39.10	
46	262+74.0 - 45.0' Lt.	RA-35	43.76	39.76	
22	268+82.5 - 27.0' Lt.	RA-5	42.35	38.35	
23	268+84.5 - 27.0' Rt.	RA-3	42.33	38.33	1
25	271+93.0 - 27.0' Rt.	RA-3	39.37	34.35	1, 3
24	271+93.0 - 27.0' Lt.	RA-3	39.37	35.37	
48	272+24.0 - 56.0' Rt.	RA-3	39.36	35.36	
50	272+37.0 - 56.0' Rt.	RA-2	39.25	33.25	1,4 , 9
49	272+60.5 - 56.0' Rt.	RA-3	38.78	34.78	
51	272+37.0 - 27.5' Rt.	RA-2	38.54	33.00	5 , 10
26	273+88.5 - 27.0' Lt.	RA-5	33.89	29.89	
27	274+74.5 - 27.0' Rt.	RA-6	31.19	25.30	3, 6
54	275+48.0 - 40.0' Rt.	RA-2	29.80	24.60	
52	275+03.5 - 71.5' Rt.	RA-3	31.22	26.90	
53	275+40.5 - 71.5' Rt.	RA-3	30.00	26.00	
29	277+36.5 - 27.0' Rt.	RA-8	21.54	17.58	7
30	277+36.5 - 27.0' Lt.	RA-8	21.54	15.58	7
32	279+18.5 - 27.0' Lt.	RA-8	11.00	05.04	7
31	279+18.5 - 27.0' Rt.	RA-8	11.00	07.04	7

LIST OF STORM SEWER PIPE

104-5B
07-16-91

LINE NUMBER	LOCATION From	LOCATION To	CLASS "D"	PIPE DIAMETER Inches	LENGTH OF LINE Feet	SLOPE %	FLOW LINES INLET Elevation	FLOW LINES OUTLET Elevation	FLOW LINES OTHER Elevation	GRANULAR BACKFILL Tons	PIPE PROFILE SHEET NO.	NOTE
P-58A	A	58	1500	18	96+A	2.00	21.10	19.06			M 14	(A)
P-58B	58	59	1500	18	272	2.00	18.95	13.50			M 14	(B)
P-59	59	A	1500	18	46+A	3.33	13.40	12.00			M 14	(C)
P-60	60	A	2000	24	236*+A	2.84	05.20	99.00			M 14	(D) *Includes 102' of Jacked Cross Pipe
P- 2	2	A	1500	15	46+A	1.15	23.20	22.60			M 14	(E)
P- 1	1	3	1500	15	35	0.97	31.64	31.30			M 14	
P- 3	3	41	1500	15	464	0.56	31.20	28.60			M 15	
P- 4	4	41	1500	15	34	3.00	30.70	29.68			M 15	
P-41	41	7	1500	15	252	2.18	28.50	23.00		23	M 15	
P-5A	A	5	1500	24	18+A	1.25	28.30	28.00			M 16	(F)
P-5B	5	6	2000	24	54*	1.02	26.65	26.10			M 16	* Includes 46' of Jacked Cross Pipe
P- 6	6	7	1500	24	45	2.00	23.90	23.00			M 16	(G)
P-18	18	19	2000	15	54	1.00	38.20	37.66		21	M 18	
P-19	19	17	1500	15	223	0.60	37.56	36.21			M 18	
P-16	16	17	2000	15	54	1.00	36.74	36.20		20	M 18	
P-17	17	13	1500	15	260	0.60	36.11	34.55			M 18	
P-14	A	13	1500	15	16+A	1.05	35.22	35.00			M 18	(H)
P-13	13	12	2000	18	60*	0.93	34.20	33.70			M 18	* Includes 46' of Jacked Cross Pipe
P-12	12	11	1500	18	296	0.61	33.60	31.80			M 17	
P-43	43	10	1500	15	44	0.41	32.50	32.32			M 17	
P-10	10	11	2000	15	54*	0.41	32.20	31.98			M 17	* Includes 46' of Jacked Cross Pipe
P-11	11	44	1500	18	90	3.11	31.70	28.90			M 17	
P-44	44	45	1500	18	245	0.69	28.80	27.10			M 17	
P-42	42	8	2000	15	98	0.53	29.80	29.33			M 16	
P- 8	8	9	2000	15	54*	2.00	29.20	28.12			M 16	* Includes 46' of Jacked Cross Pipe
P- 9	9	45	1500	15	32	2.00	28.00	27.36			M 16	
P-45	45	7	1500	18	284	1.40	26.98	23.00			M 16	
P-20	20	21	2000	15	54	0.39	40.32	40.11		23	M 19	
P-21	21	47	1500	15	215	0.30	40.00	39.35			M 19	(I)
P-46	46	P-21	1500	15	13	1.00	40.00	39.87			M 19	
P-47	47	A	1500	15	25+A	0.32	39.30	39.20			M 19	(J)
P-22	22	23	2000	15	54	0.41	39.02	38.80		20	M 19	
P-23	23	25	1500	15	302	0.90	38.70	35.96			M 21	
P-24	24	25	2000	15	54	1.20	35.65	35.00		25	M 21	
P-25	25	51	2000	15	43		34.75	34.00			M 20	
P-48	48	50	2000	15	14	2.08	36.00	35.75		8	M 19	
P-49	49	50	2000	15	19	2.00	35.50	35.06		10	M 19	
P 50	50	51	2000	15	25		34.50	34.00			M 20	
P 50 A	EXIST	50	2000	15	18		EXIST.	34.75			M 20	
P 51	51	27	2000	15	230		33.50	27.60			M 20	
P-26	26	27	2000	15	96	2.81	30.30	27.60		35	M 21	
P-27	27	54	2000	15	73	1.00	25.70	24.97		30	M 21	
P-52	52	53	2000	15	37	2.16	27.10	26.30		16	M 21	
P-53	53	54	1500	15	28	2.00	26.20	25.64			M 21	
P-28	54	A	2000	15	117+A	4.36	24.85	17.40		48	M 21	(K)
P-29	29	30	2000	15	55	1.00	18.24	17.69		30	M 22	(L)
P-30	30	32	1500	15	183	5.07	15.78	06.55			M 22	
P-31	31	32	2000	15	55	2.83	07.24	05.68		39.32	M 22	
P-32	32	A	1500	15	46	1.00	05.30	04.86			M 22	(M)
			CMSS	15	70	15.10	04.86	94.82			M 22	Elbow at Sta. 279+62.5, 40.4' Lt.
			CMSS	15	7+A	1.00	94.82	94.69			M 22	Elbow at Sta. 280+29.0, 57.6' Lt.

For Storm Sewer Notes
Refer to Sheet No. M.02.

LIST OF INTAKES AND UTILITY ACCESSES

104-5A
06-15-93

NUMBER	LOCATION	TYPE OR STANDARD ROAD PLAN	FORM GRADE Elev.	BOTTOM WELL Elev.	NOTE
33	284+66.5 - 27.0' Lt.	RA-5	81.16	77.16	
34	284+66.5 - 27.0' Rt.	RA-5	81.16	77.16	
36	286+75.0 - 27.0' Rt.	RA-3	79.03	73.80	1
35	286+75.0 - 27.0' Lt.	RA-3	79.03	75.03	
39	288+76.0 - 27.0' Rt.	RA-3	78.19	72.00	
40	289+00.0 - 27.0' Lt.	RA-3	78.28	74.28	1
37	290+43.5 - 24.5' Rt.	RA-5	77.63	73.63	
38	290+43.5 - 24.5' Lt.	RA-5	77.50	73.10	1

LIST OF STORM SEWER PIPE

104-5B
07-16-91

LINE NUMBER	LOCATION From	LOCATION To	CLASS "D"	PIPE DIAMETER Inches	LENGTH OF LINE Feet	SLOPE %	FLOW LINES INLET Elevation	FLOW LINES OUTLET Elevation	FLOW LINES OTHER Elevation	GRANULAR BACKFILL Tons	PIPE PROFILE SHEET NO.	NOTE
P-33	33	34	2000	15	54	1.00	78.06	77.52		22	M 23	
P-34	34	36	1500	15	202	1.19	77.42	74.94			M 23	
P-35	35	36	2000	15	54	1.00	75.30	74.76		50	M 23	
P-36	36	A	2000	15	54+A	1.00	74.18	73.50			M 23	(N)
P-39	39	40	2000	15	62	1.00	74.90	74.32		34	M 23	
P-40	40	E.P.+A	1500	15	78+A	2.00	72.20	72.16			M 23	(O)
P-37	37	38	2000	15	49	0.41	73.78	73.58		23	M 23	
P-38	38	A	1500	15	26+A	1.00	73.32	73.00			M 23	(P)

NOTES FOR INTAKES AND UTILITY ACCESSES

1. Requires concrete fillet.
2. Connect existing 24" storm sewer.
3. Connect existing 15" storm sewer.
4. Construct over existing 15" storm sewer from east & west.
5. Construct over existing 15" storm sewers from north, south & east.
6. Requires RA-7 intake (extension unit for Standard RA-6 intake).
7. Variable length = 12 ft.
8. Inside Dimension = 4'-0" x 4'-0".
11. The inserts on these intakes should be 3.0" low to ensure drainage during staging. After the surface course is placed the inserts will be replaced at contractors expense to proposed form grades.

GENERAL NOTES

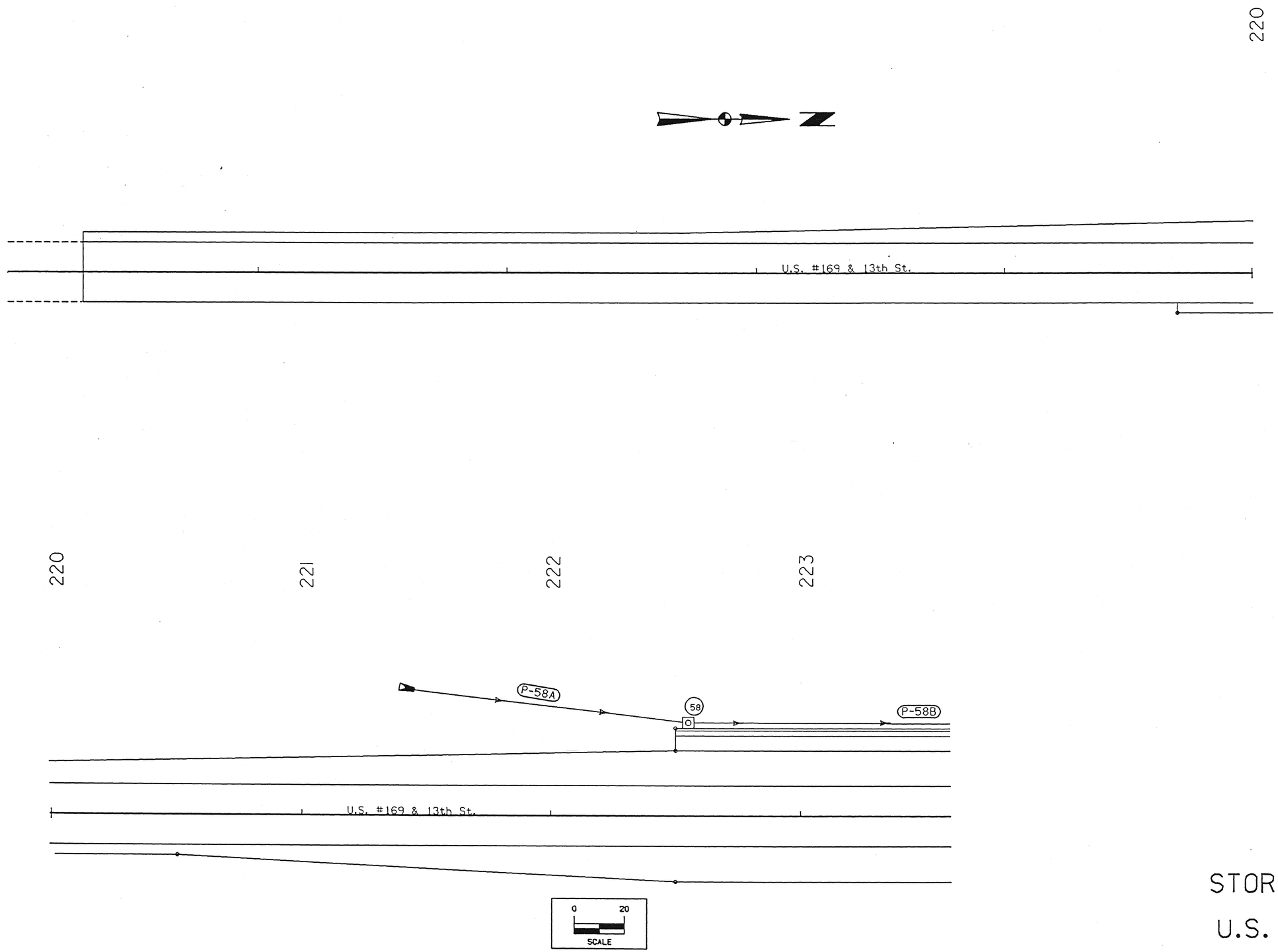
A = Apron
E.P. = Existing Pipe
CMSS = Corrugated Metal Storm Sewer
See sheet M.03 and M.04 for storm sewer typicals

NOTES FOR STORM SEWER PIPE

(A) P-58A Inlet Sta. 221+54.5 - 60.5' Lt. Requires one 18" RF-26 pipe apron guard. Includes three - type 3, RF-14 connected pipe joints.
(B) P-58B Requires one 18" x 18" Tee Section located at Sta. 223+46-36.5' Lt. 2.0'± of 10" C.M.P. to connect existing 10" C.M.P. from building and one RF-2, C-4 collar to be incidental to Tee Section.
(C) P-59 Outlet Sta. 225+60 - 72' Lt. Includes three - type 3, RF-14 connected pipe joints.
(D) P-60 Outlet Sta. 224+98.5 - 105.5' Rt. Includes three-type 3, RF-14 connected pipe joints.
(E) P- 2 Outlet Sta. 232+53.5 - 55.5' Rt. Includes three-type 3, RF-14 connected pipe joints.
(F) P- 5A Inlet Sta. 245+06.5 - 54.5' Lt. Requires one 24" RF-26 pipe apron guard. Includes three - type 3, RF-14 connected pipe joints.
(G) P- 6 Connect existing 8" Tile from the N.W. with a RA-38 Wye Connection.
(H) P-14 Inlet Sta. 254+00 - 51' Lt. Requires one 15" RF-26 pipe apron guard. Includes three type 3, connected pipe joints.
(I) P-21 Requires one 15" x 15" tee section at Sta. 262+74 - 29' Lt.
(J) P-47 Outlet Sta. 264+50 - 64' Lt. Includes three - type 3, RF-14 connected pipe joints.
(K) P-28 Outlet Sta. 276+22 - 56' Lt. Includes type 3, RF-14 connected pipe joints.
(L) P-29 Due to existing groundline, 15 tons of granular to be at contractors expense. See HD-9, sheet M.04 for details.
(M) P-32 Outlet Sta. 280+42 - 61' Lt. Includes two 7.5° CMP elbows, one RF-2, C-3 collar, and three - type 2, RF-14 connected pipe joints.
(N) P-36 Outlet Sta. 287+36.5 - 63' Rt. Includes three - type 3, RF-14 connected pipe joints.
(O) P-40 Connect to existing 84" storm sewer. Includes one RA-38 connection.
(P) P-38 Outlet Sta. 290+36 - 59' Lt. Includes three - type 3, RF-14 connected pipe joints.

GRANULAR BACKFILL FOR RA-6 INTAKES & UTILITY ACCESSES

9. 3.0 Tons
10. 3.0 Tons



For Storm Sewer Tabulations
Refer to Sheet No. M.01.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheet No. M.16.

STORM SEWER LAYOUT
U.S. 169 & 13th ST.

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)--19-46	SHEET NUMBER	M.03

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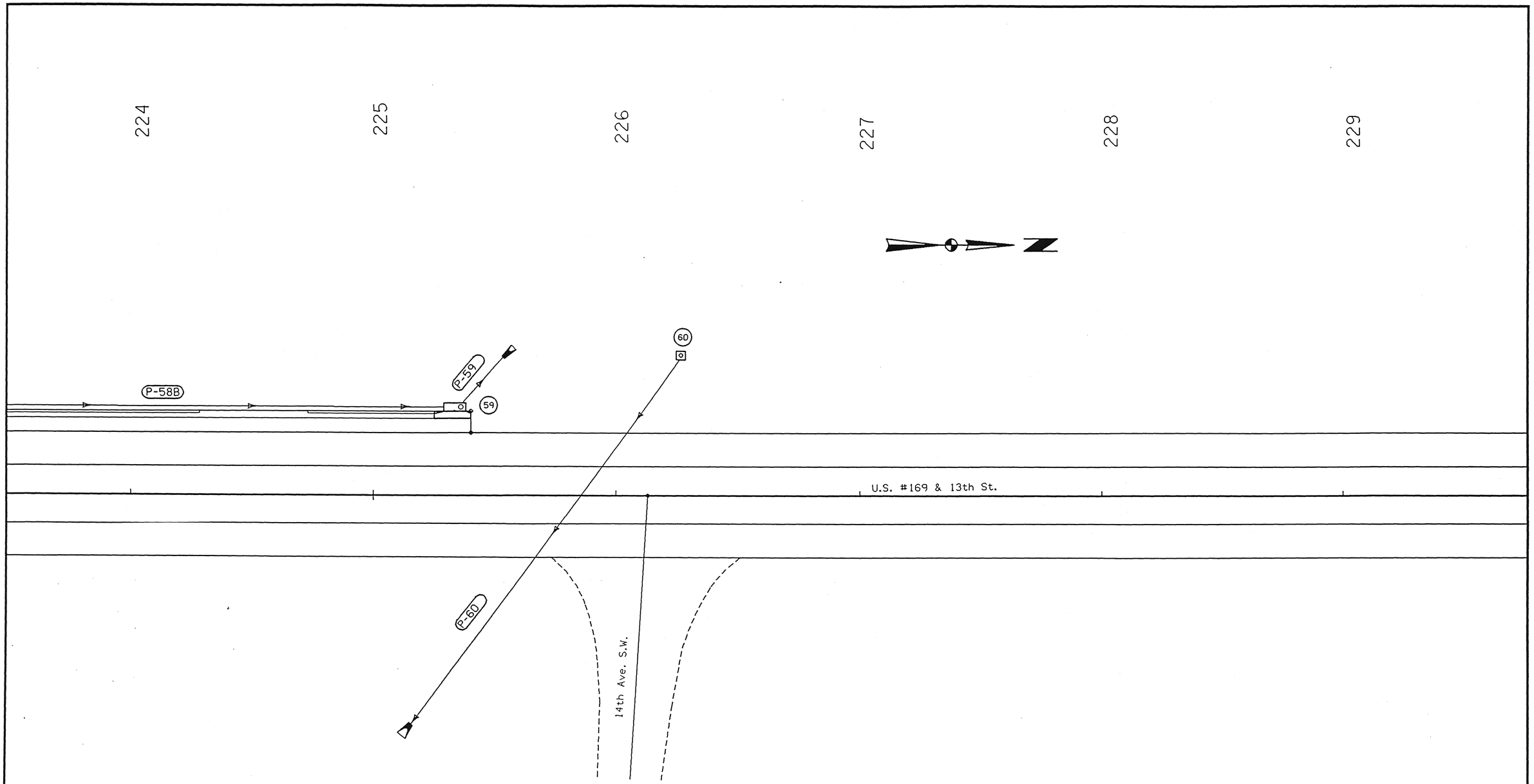
01



For Storm Sewer Tabulations
Refer to Sheet No. M.01.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheet No. M.16.

0 20
SCALE

STORM SEWER LAYOUT
U.S. 169 & 13th ST. and 14th Ave. SW

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER M.04

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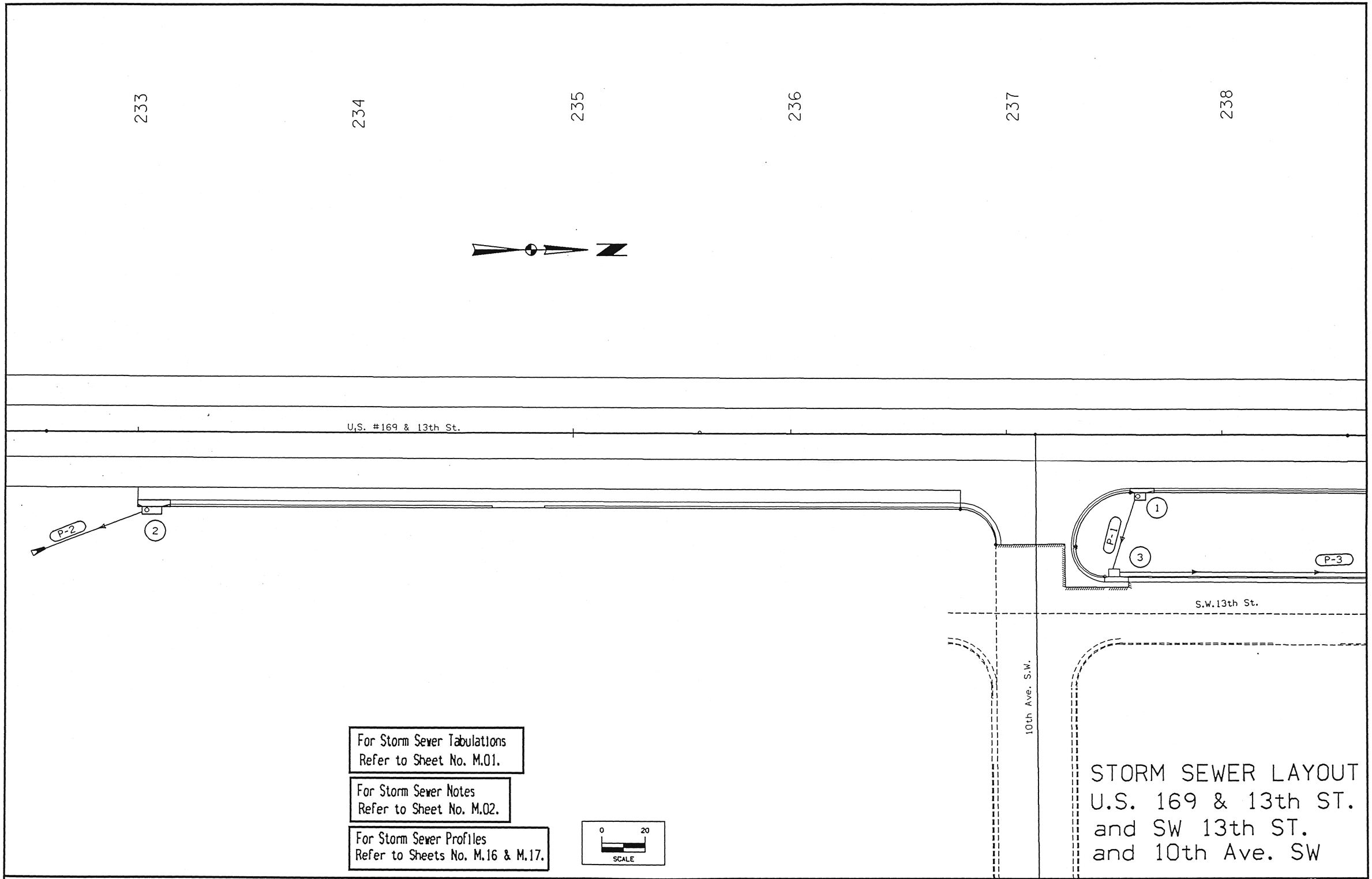

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.05

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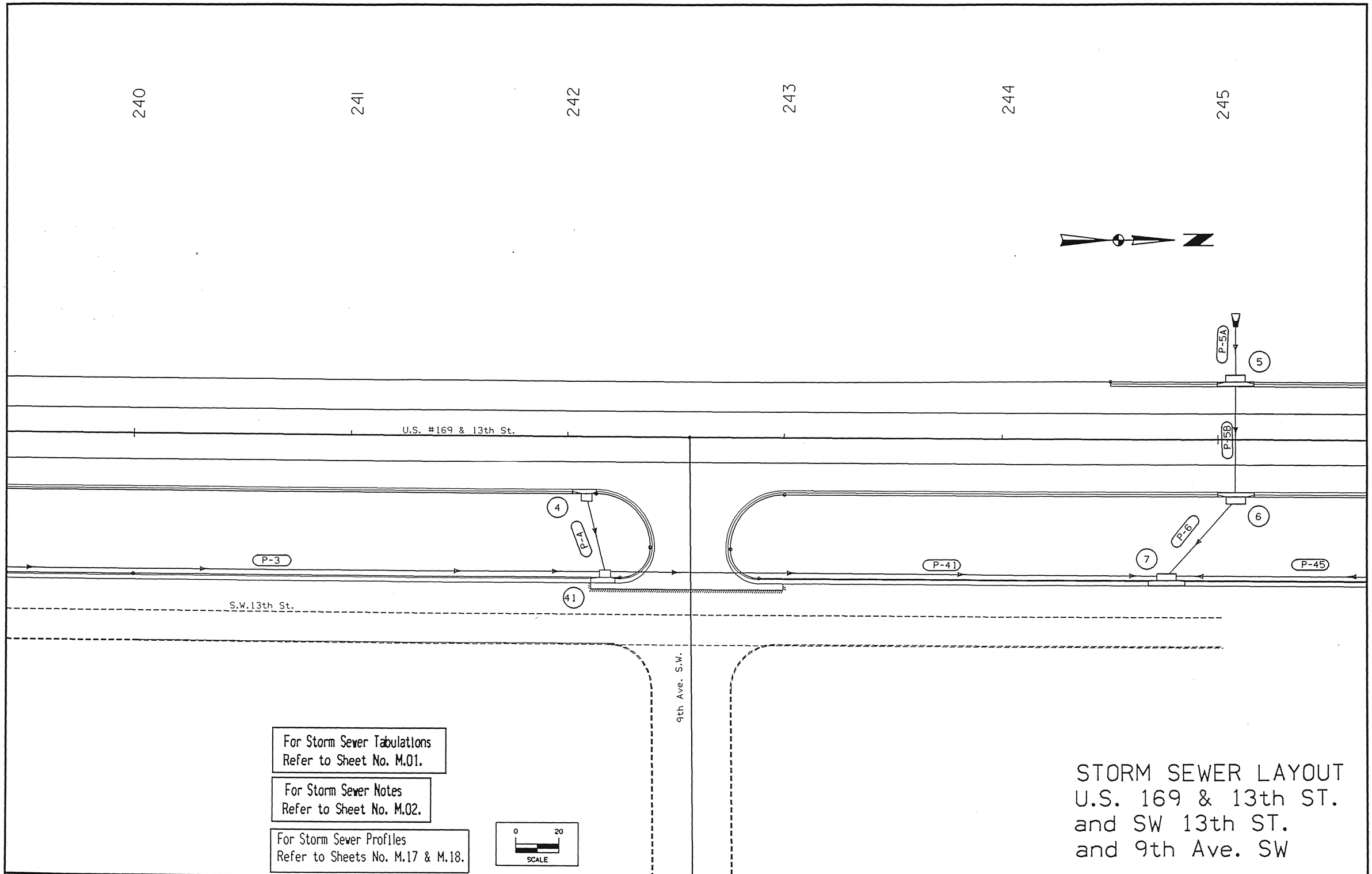

For Storm Sewer Tabulations
Refer to Sheet No. M.01.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheets No. M.17 & M.18.

STORM SEWER LAYOUT
U.S. 169 & 13th ST.
and SW 13th ST.
and 9th Ave. SW

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.06

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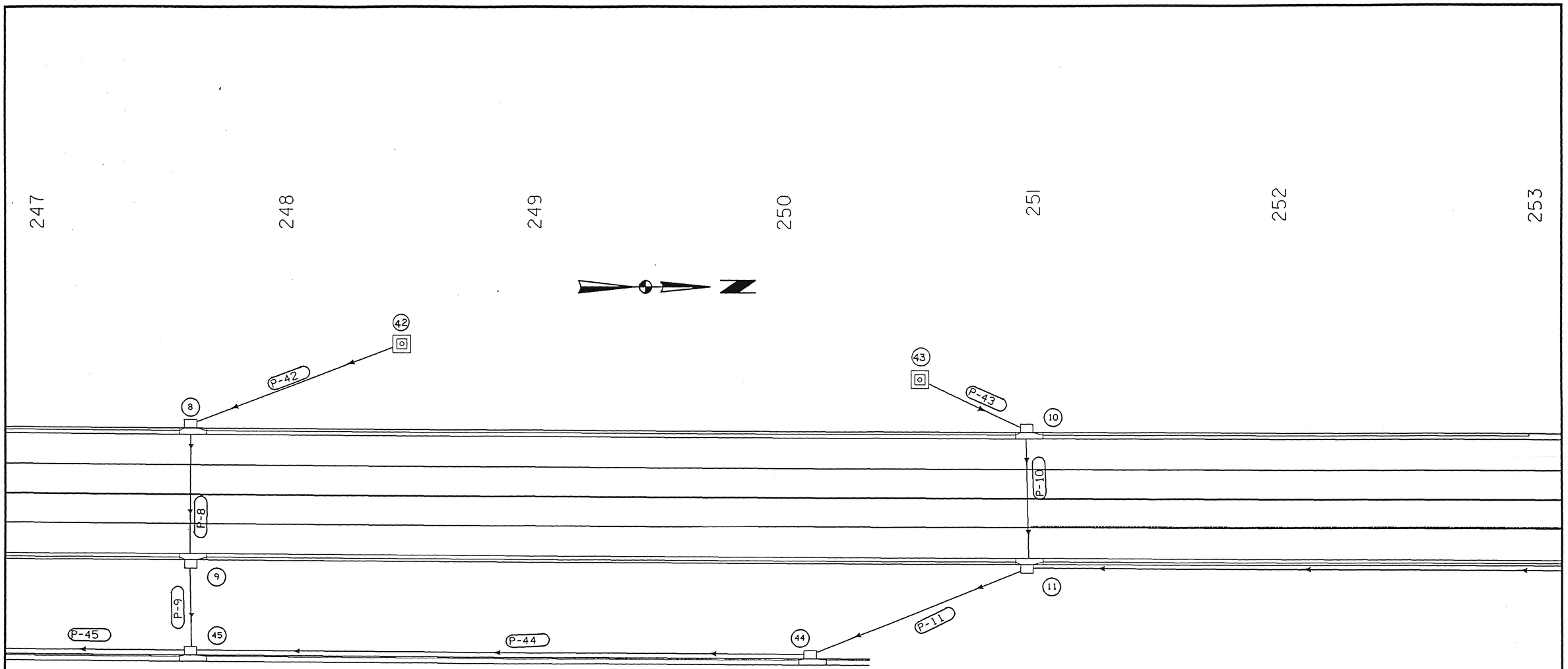

For Storm Sewer Tabulations
Refer to Sheet No. M.01.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheets No. M.18 & M.19.

0 FEET 20

STORM SEWER LAYOUT
U.S. #169 & 13th ST.
and S.W. 13th ST.

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER M.07

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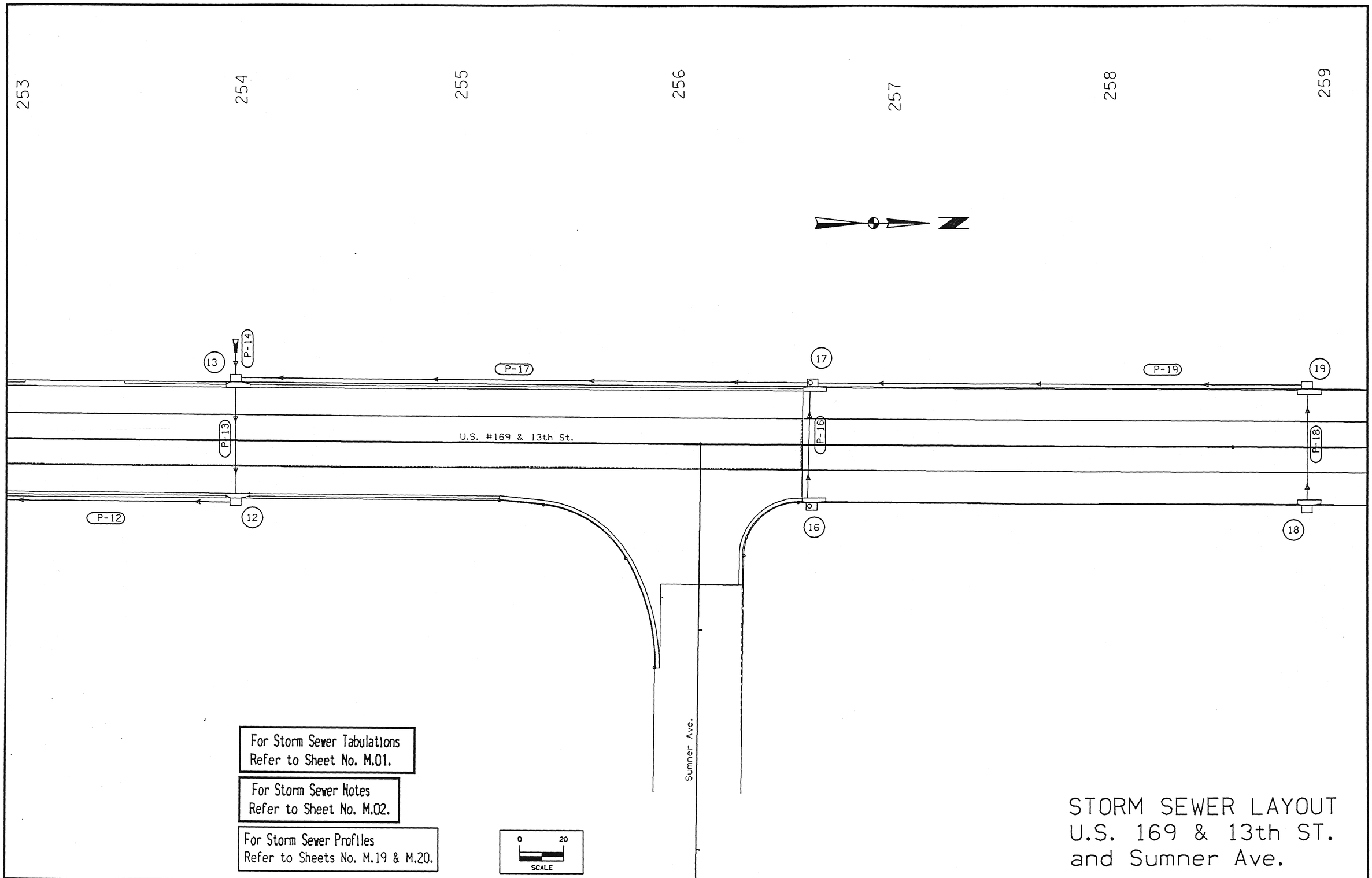

For Storm Sewer Tabulations
Refer to Sheet No. M.01.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheets No. M.19 & M.20.

STORM SEWER LAYOUT
U.S. 169 & 13th ST.
and Sumner Ave.

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M. 08

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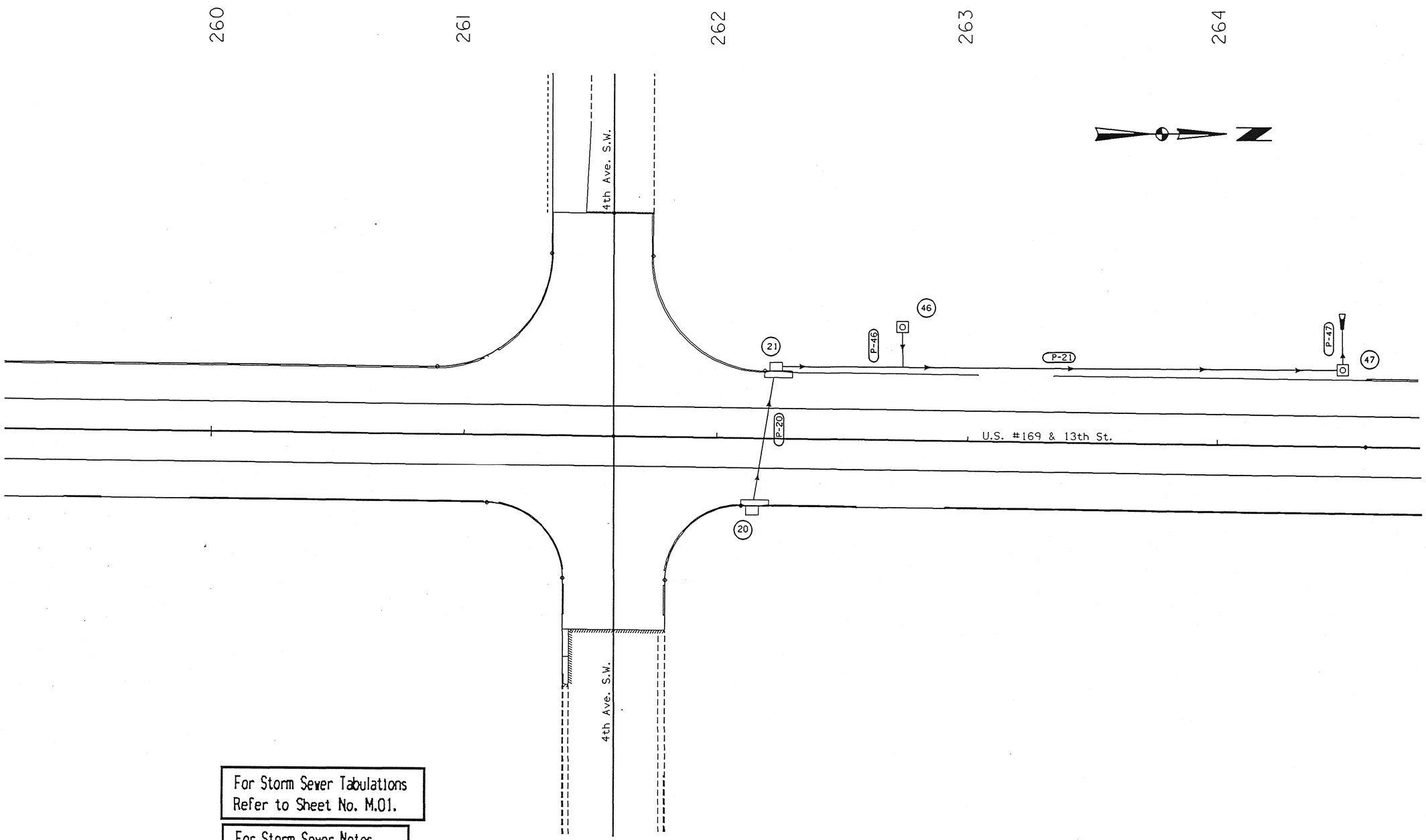

For Storm Sewer Tabulations
Refer to Sheet No. M.01.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheet No. M.21.

0 20
SCALE

STORM SEWER LAYOUT
U.S. 169 & 13th ST.
and 4th Ave. SW

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.09

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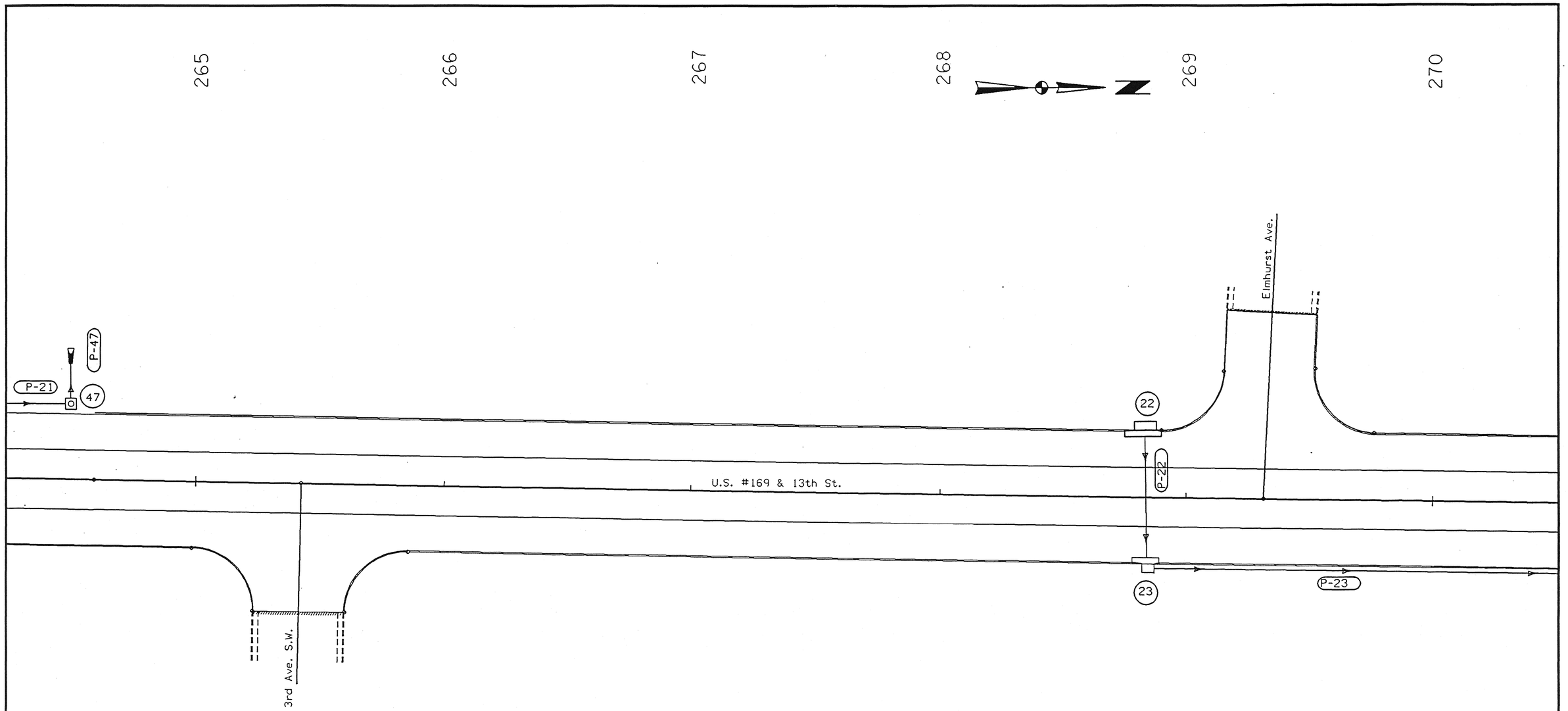

For Storm Sewer Tabulations
Refer to Sheet No. M.01.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheets No. M.21 & M.22.

0 20
SCALE

STORM SEWER LAYOUT
U.S. 169 & 13th ST.
and 3rd Ave. SW
and Elmhurst Ave.

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.10

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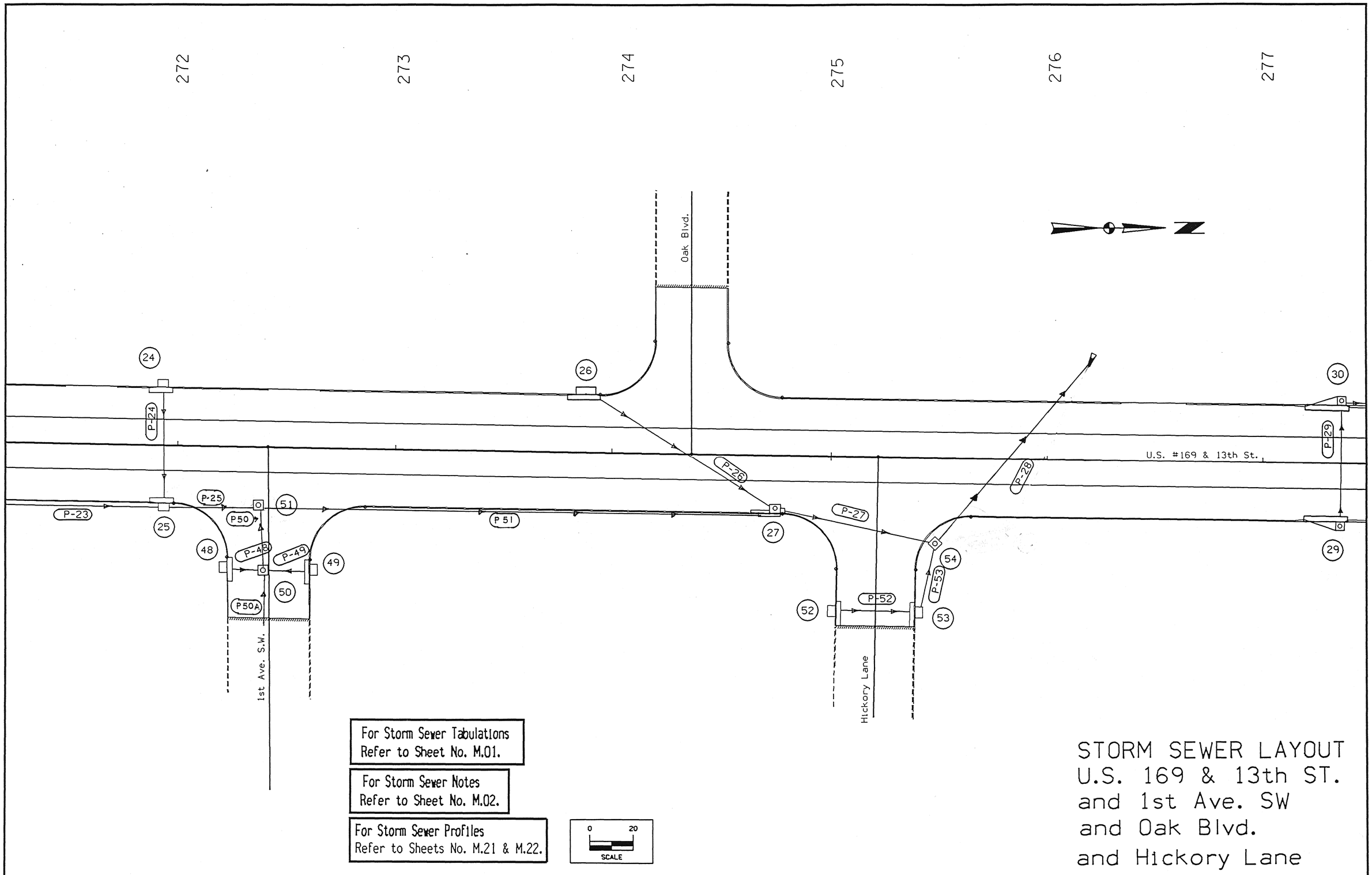

STORM SEWER LAYOUT
U.S. 169 & 13th ST.
and 1st Ave. SW
and Oak Blvd.
and Hickory Lane

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.11

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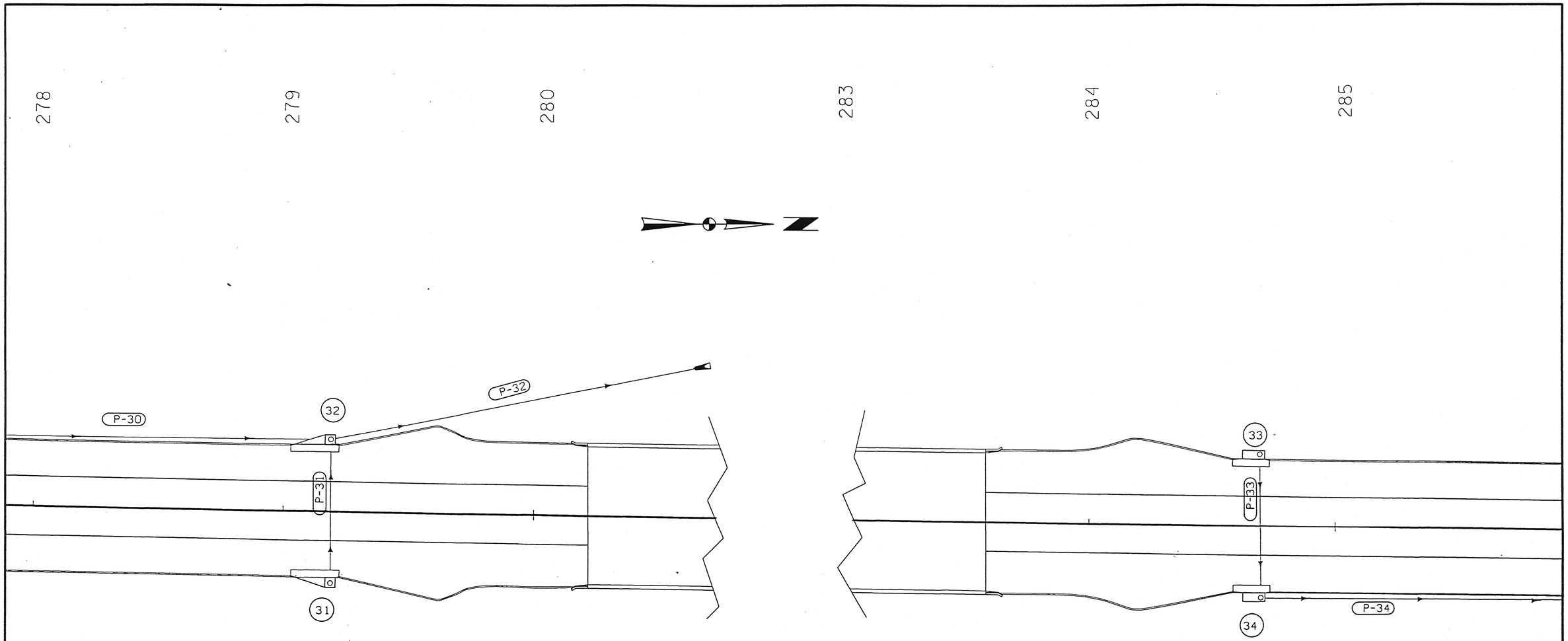

For Storm Sewer Tabulations
Refer to Sheets No. M.01 & M.02.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheets No. M.23 & M.24.

0 20
SCALE

STORM SEWER LAYOUT
U.S. 169 & 13th ST.

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER M.12

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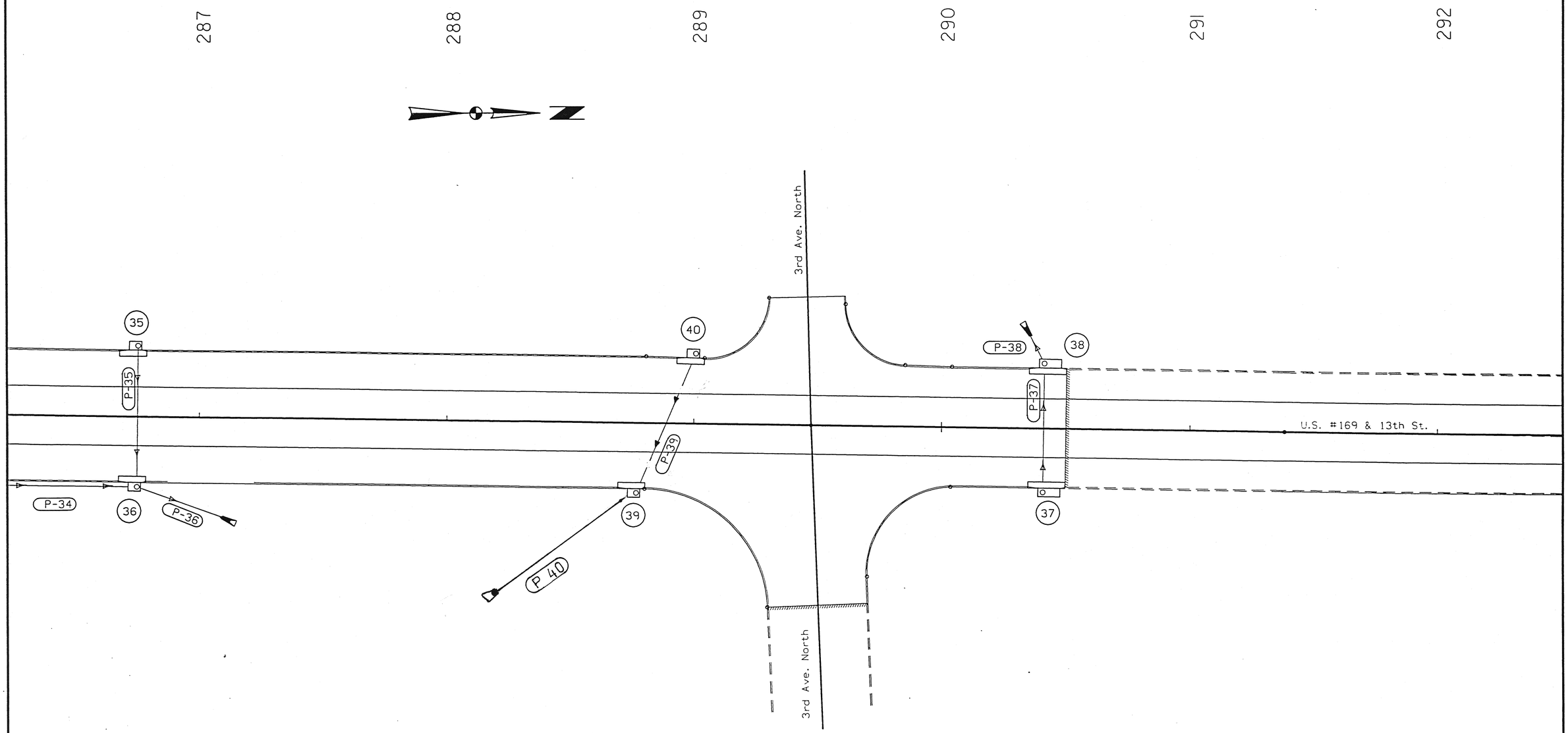

For Storm Sewer Tabulations
Refer to Sheet No. M.02.

For Storm Sewer Notes
Refer to Sheet No. M.02.

For Storm Sewer Profiles
Refer to Sheet No. M.24.

0 20
SCALE

STORM SEWER LAYOUT
U.S. 169 & 13th ST.
and 3rd Ave. North

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER M.13

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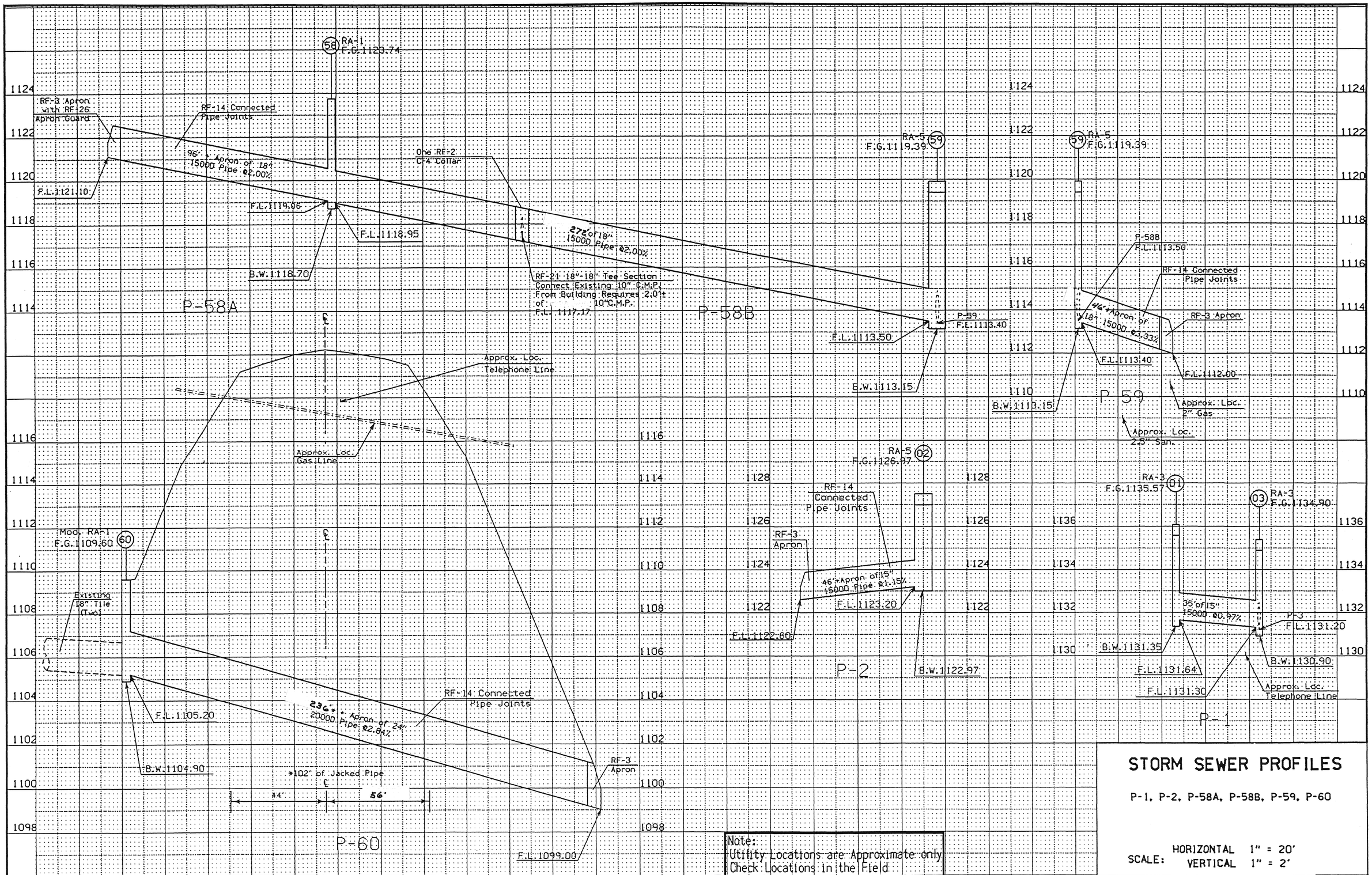

Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-1, P-2, P-58A, P-58B, P-59, P-60

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.14

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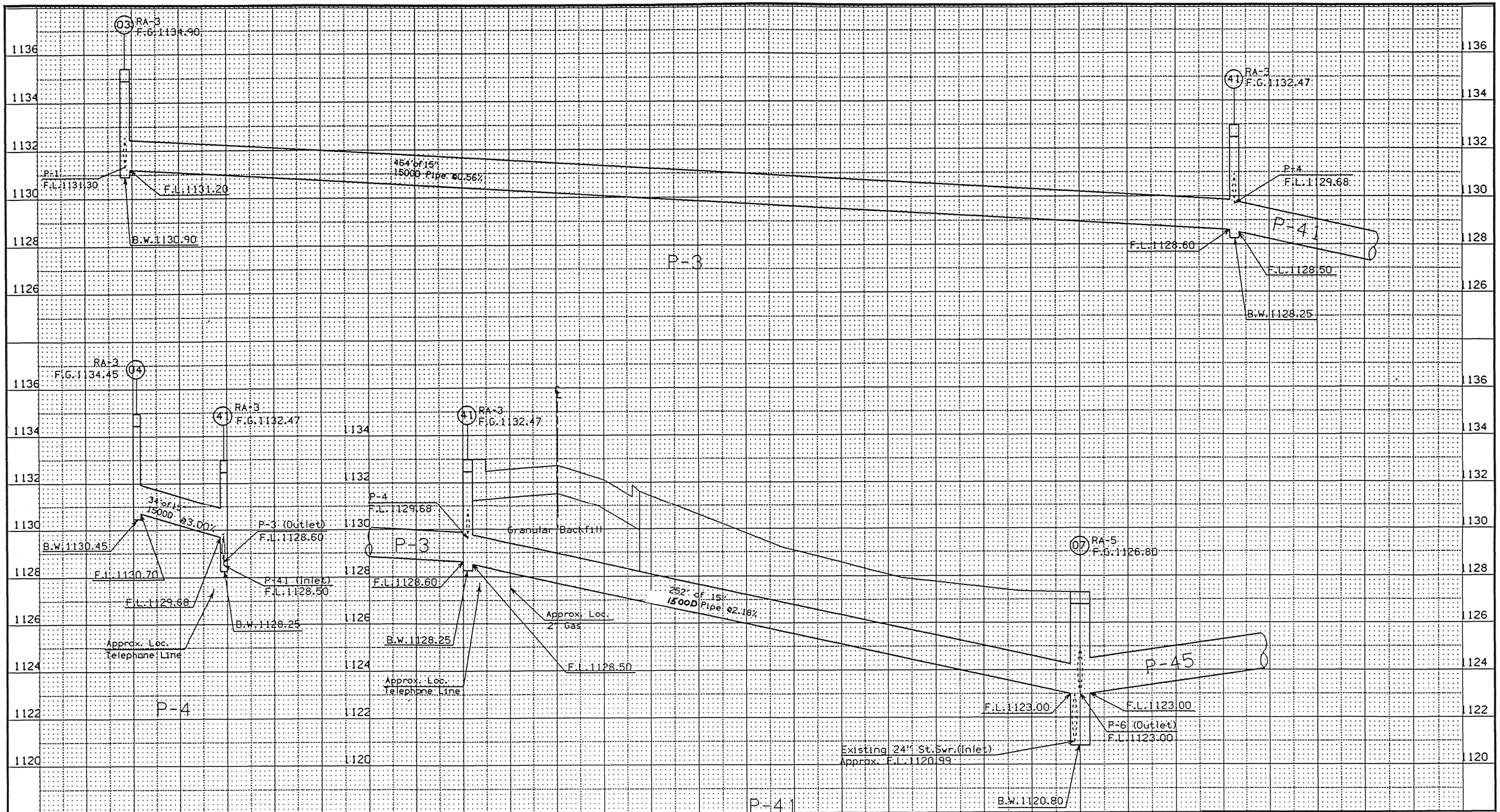

Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-3, P-4, P-41

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M. 15

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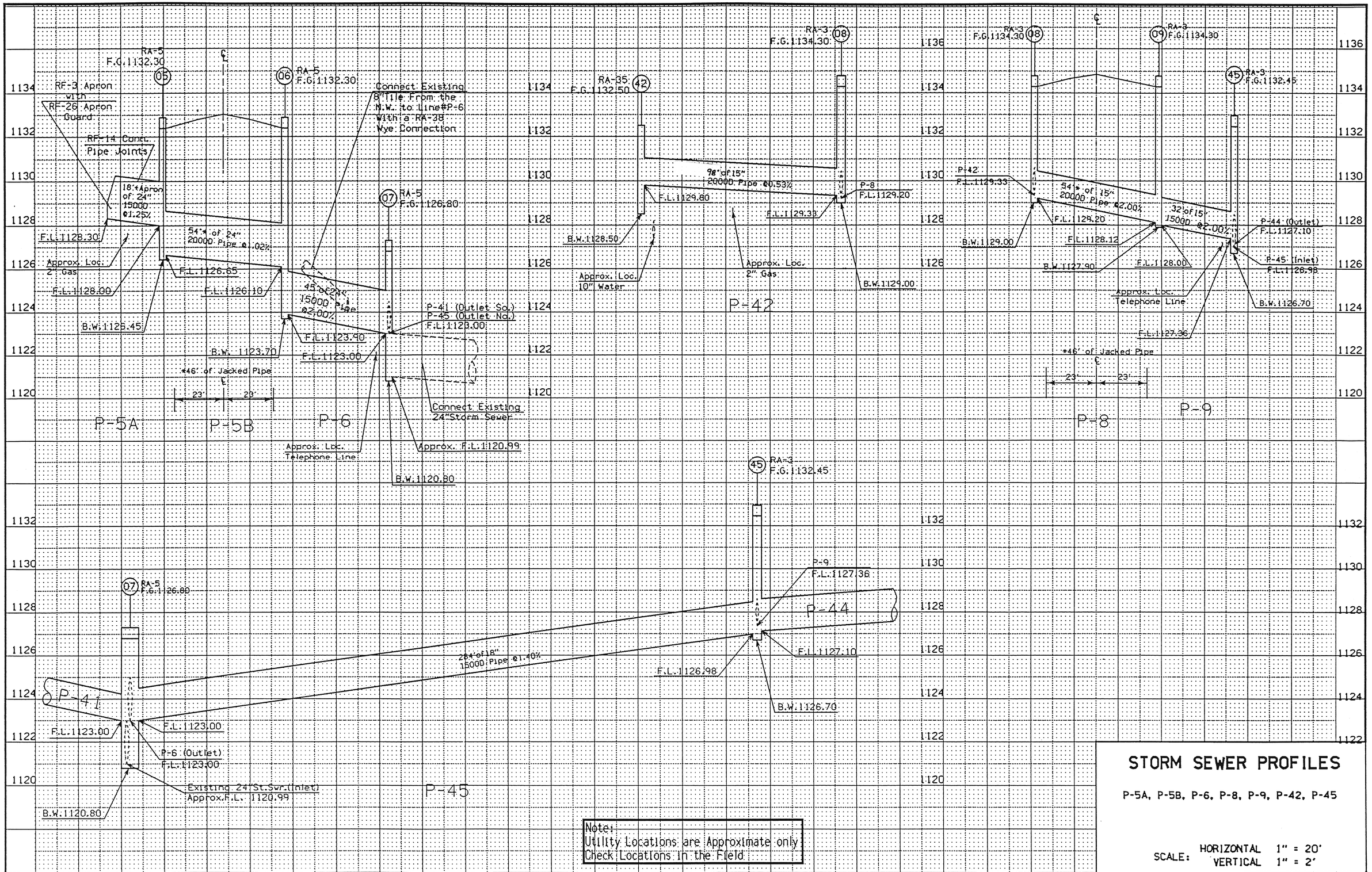

Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-5A, P-5B, P-6, P-8, P-9, P-42, P-45

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER M.16

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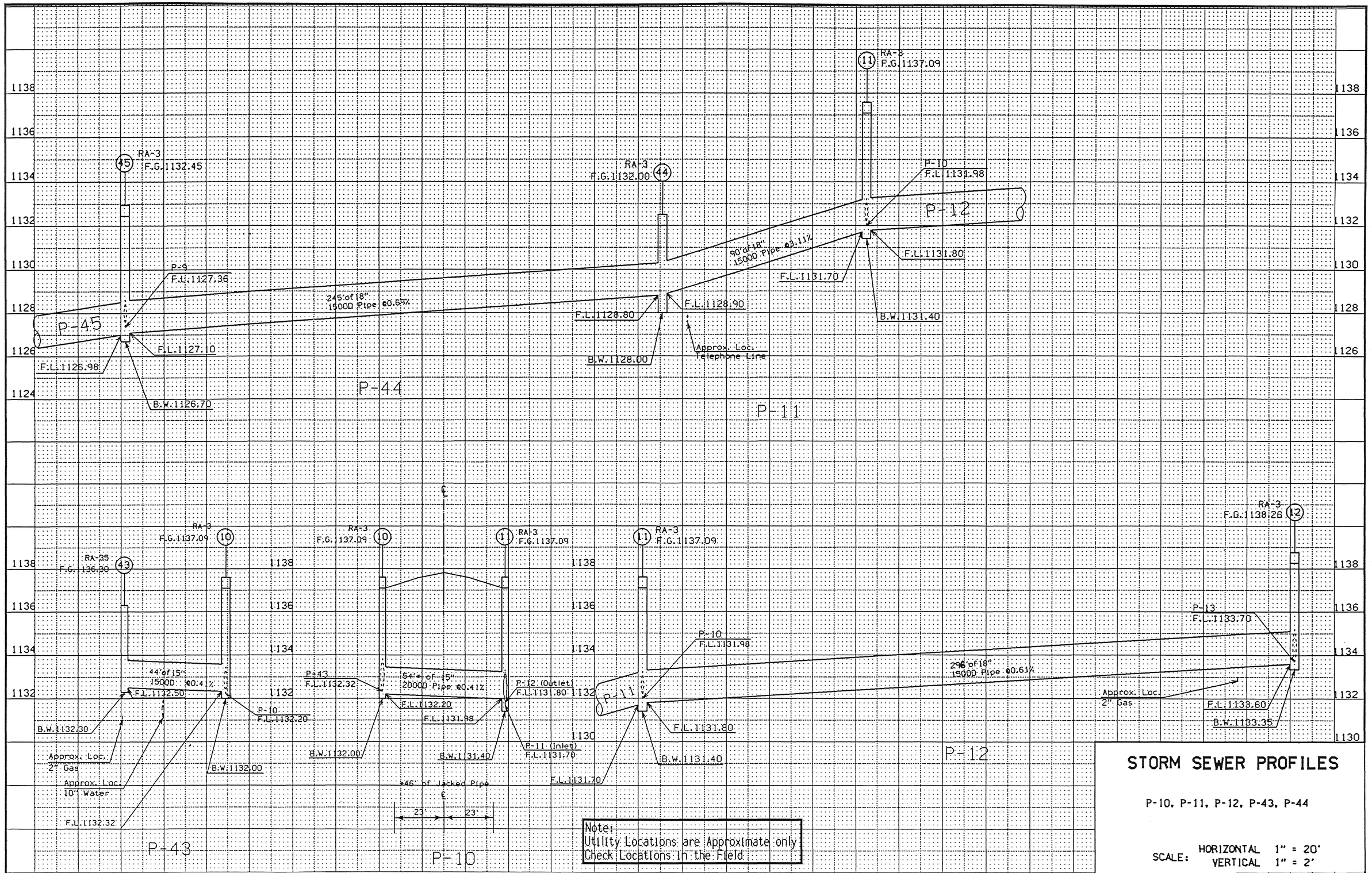

STORM SEWER PROFILES

P-10, P-11, P-12, P-43, P-44

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)--19-46	SHEET NUMBER M.17

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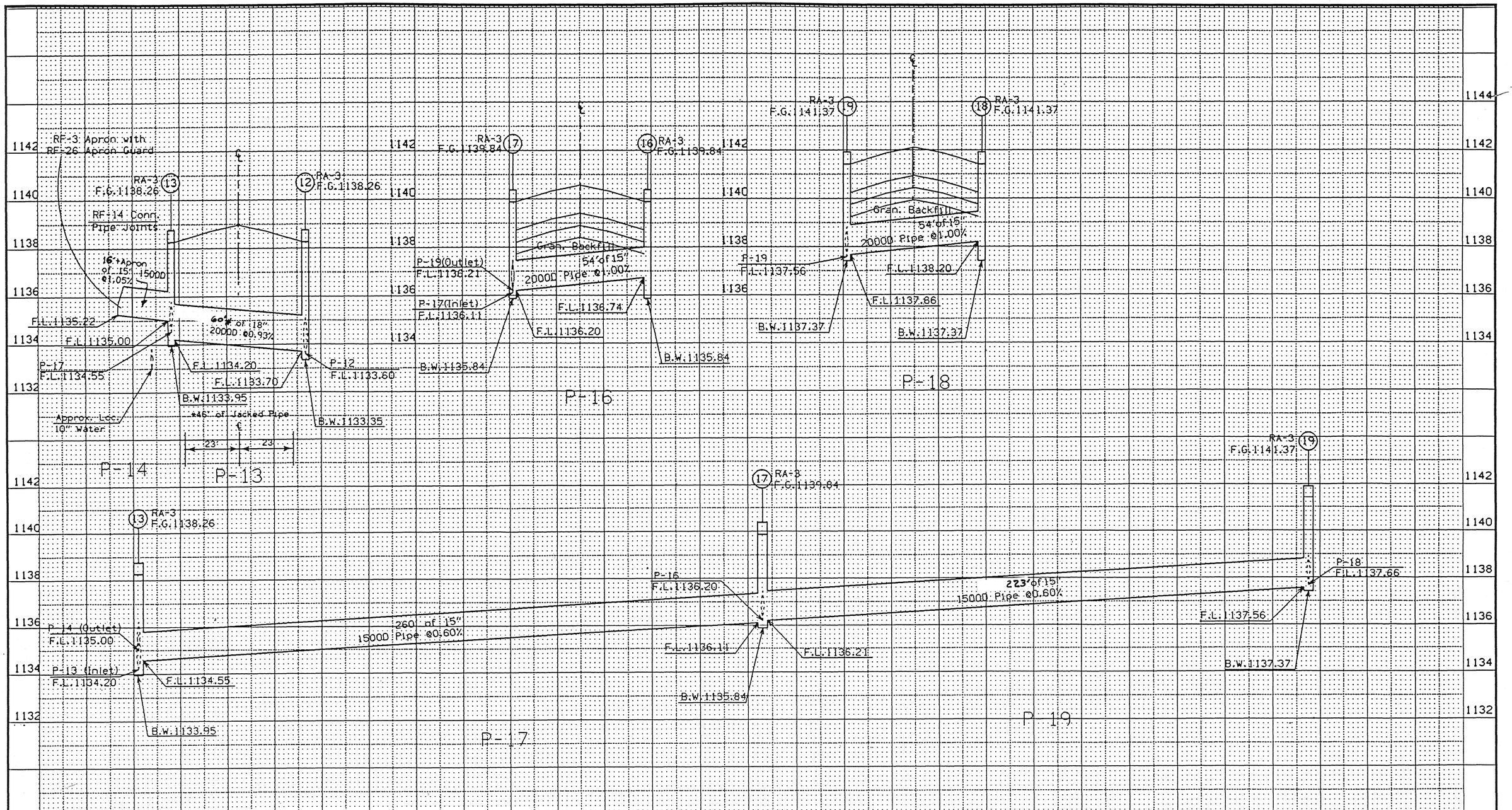

Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-13, P-14, P-16, P-17, P-18, P-19

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.18

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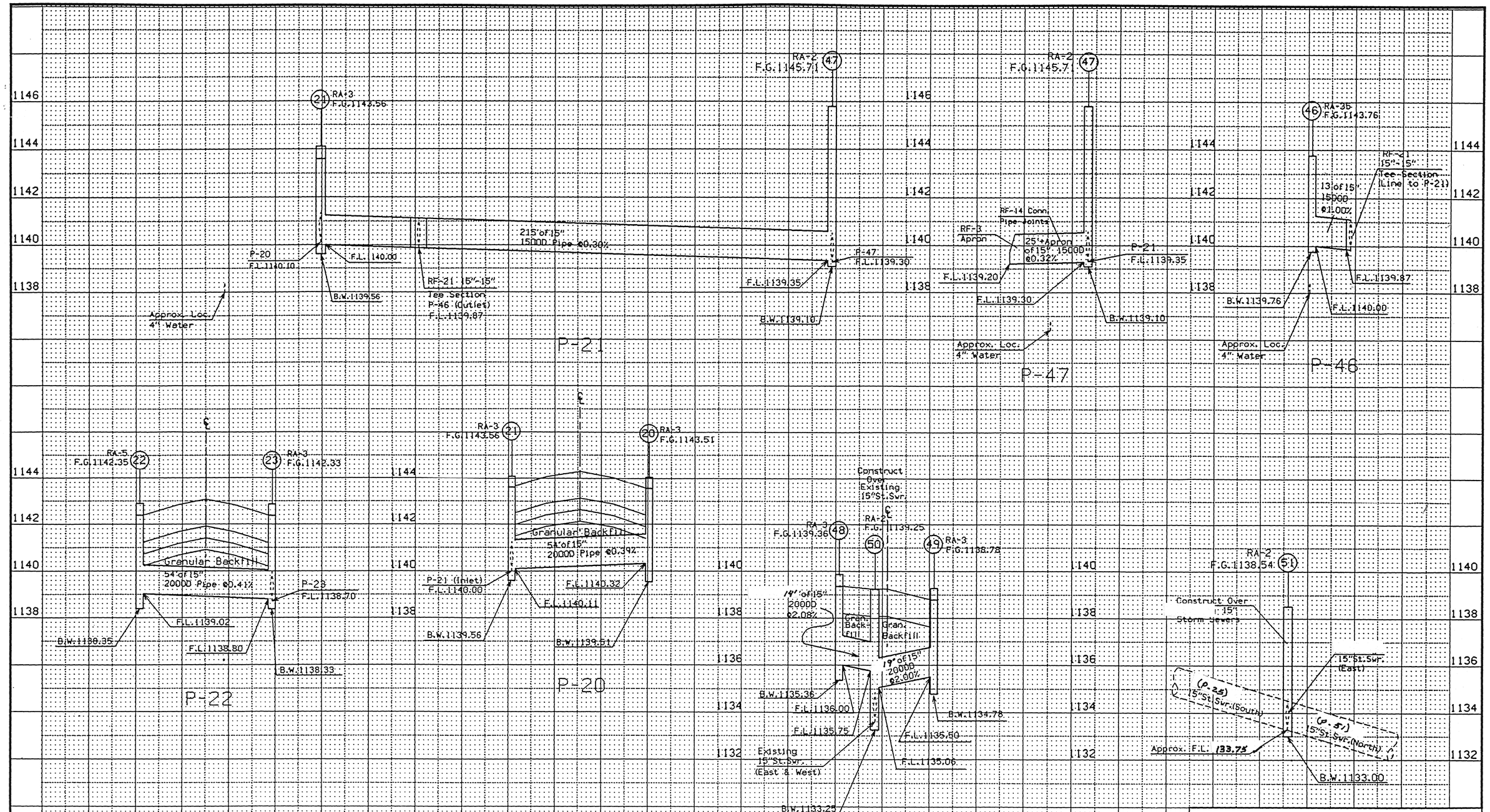

Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-20, P-21, P-22, P-46, P-47, P-48, P-49

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER NHS-F-169-7(35)- -19-46	SHEET NUMBER M.19

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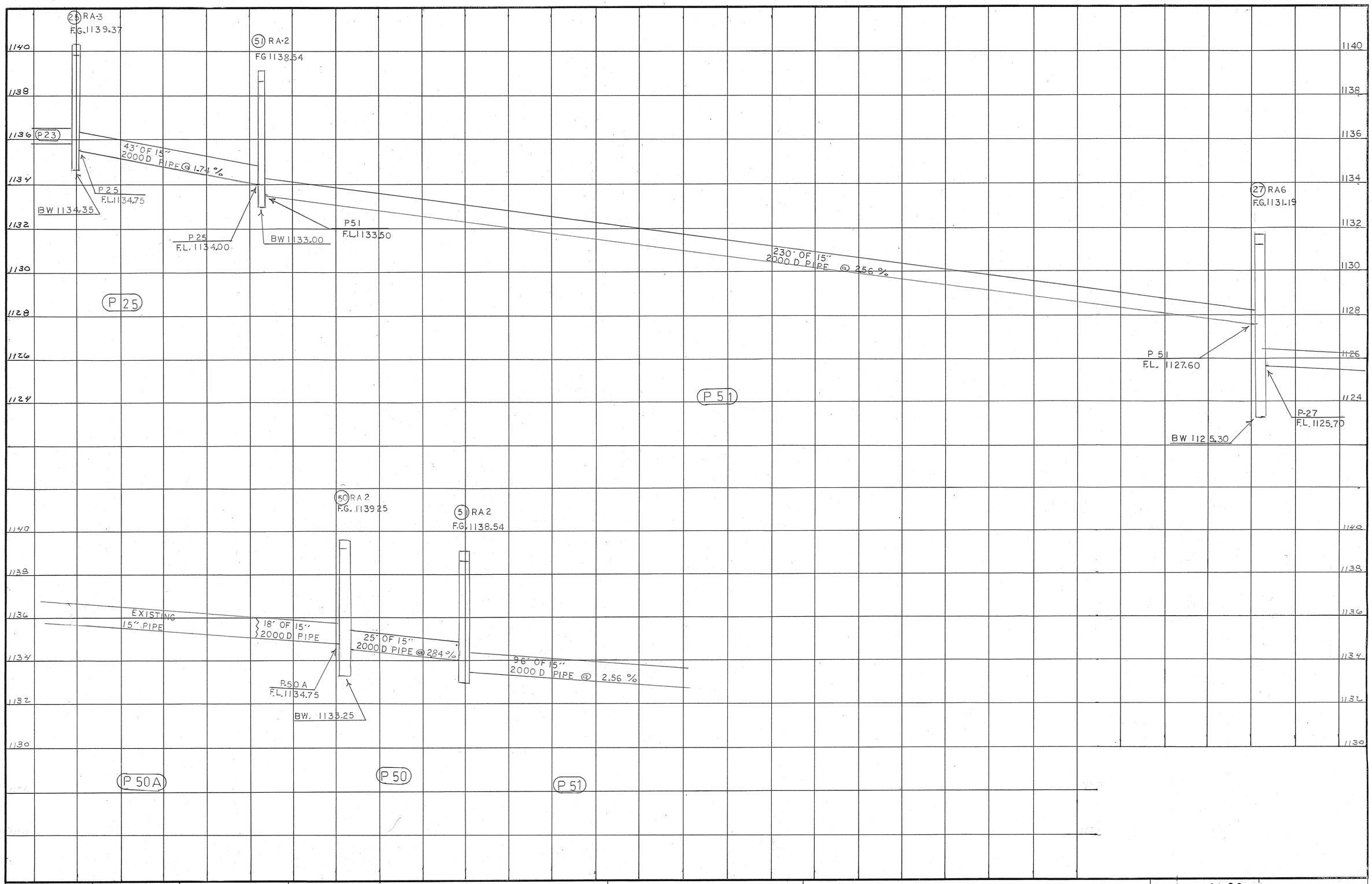
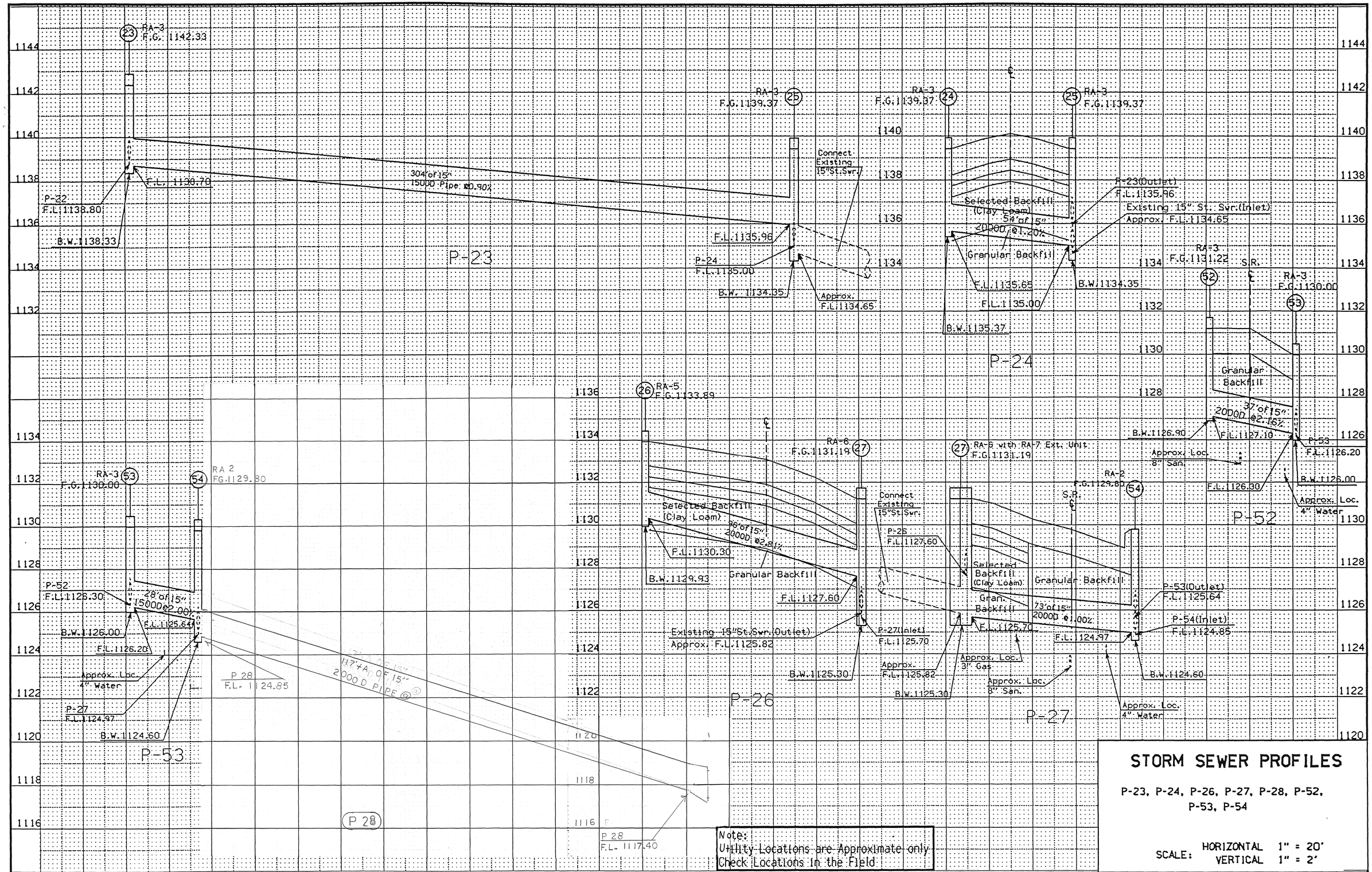


STATE OF IOWA	FHWA REGION 7	FISCAL YEAR		COUNTY	PROJECT NUMBER	SHEET NUMBER M 20	TOTAL SHEETS



Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-23, P-24, P-26, P-27, P-28, P-52, P-53, P-54

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)--19-46	SHEET NUMBER	M.21

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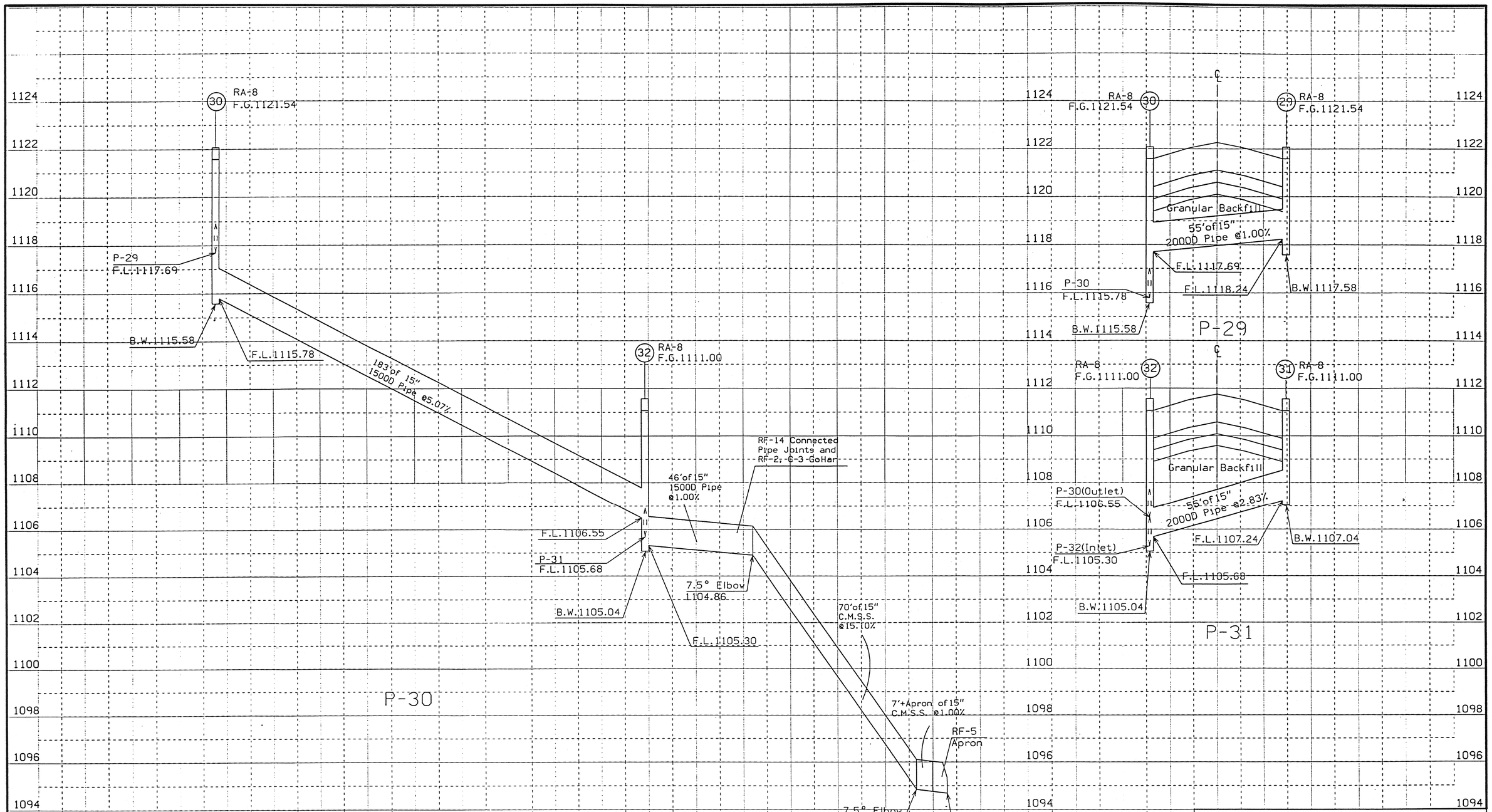

Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-29, P-30, P-31, P-32

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.22

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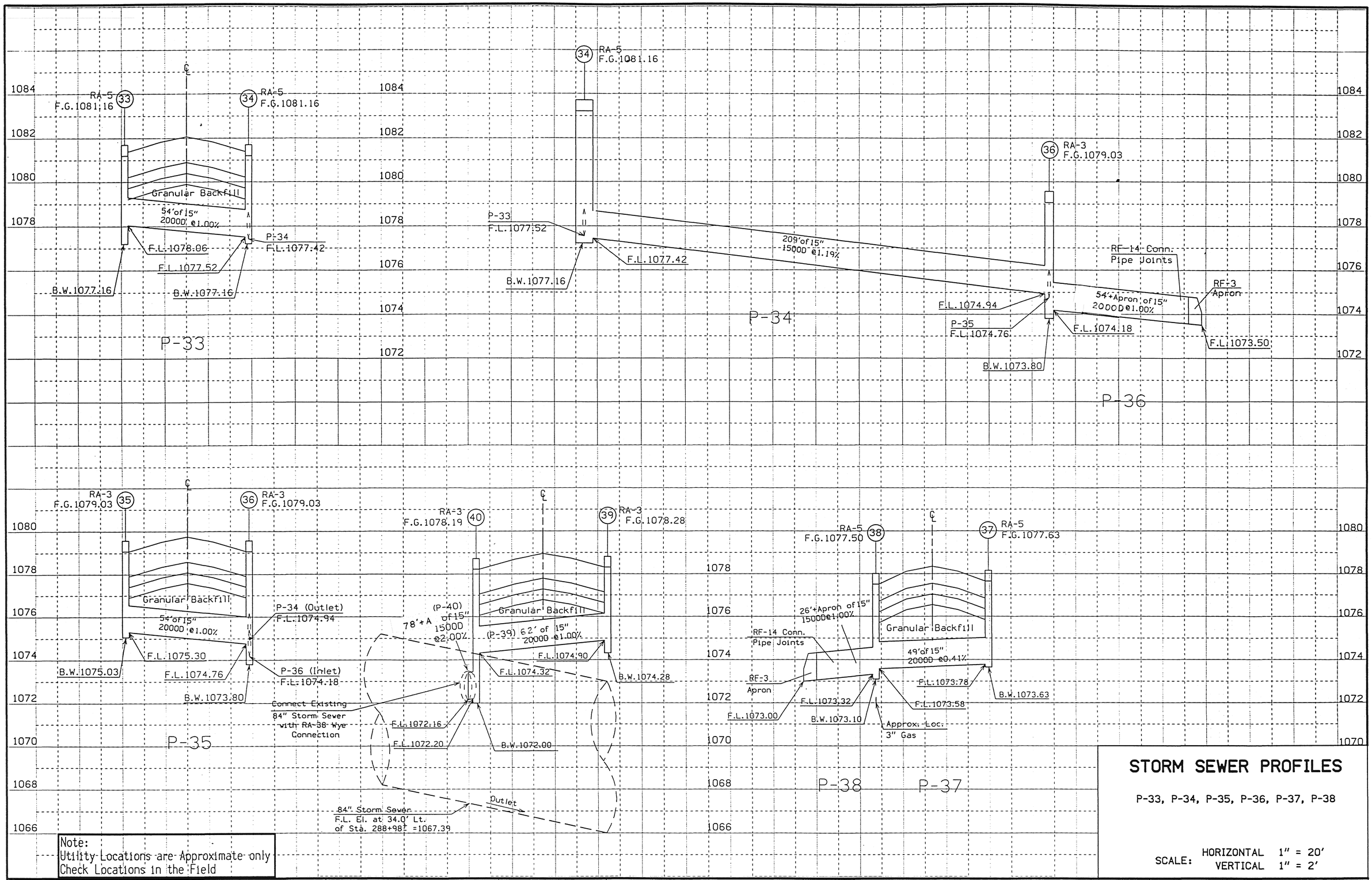

Note:
Utility Locations are Approximate only
Check Locations in the Field

STORM SEWER PROFILES

P-33, P-34, P-35, P-36, P-37, P-38

SCALE: HORIZONTAL 1" = 20'
VERTICAL 1" = 2'

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	M.23

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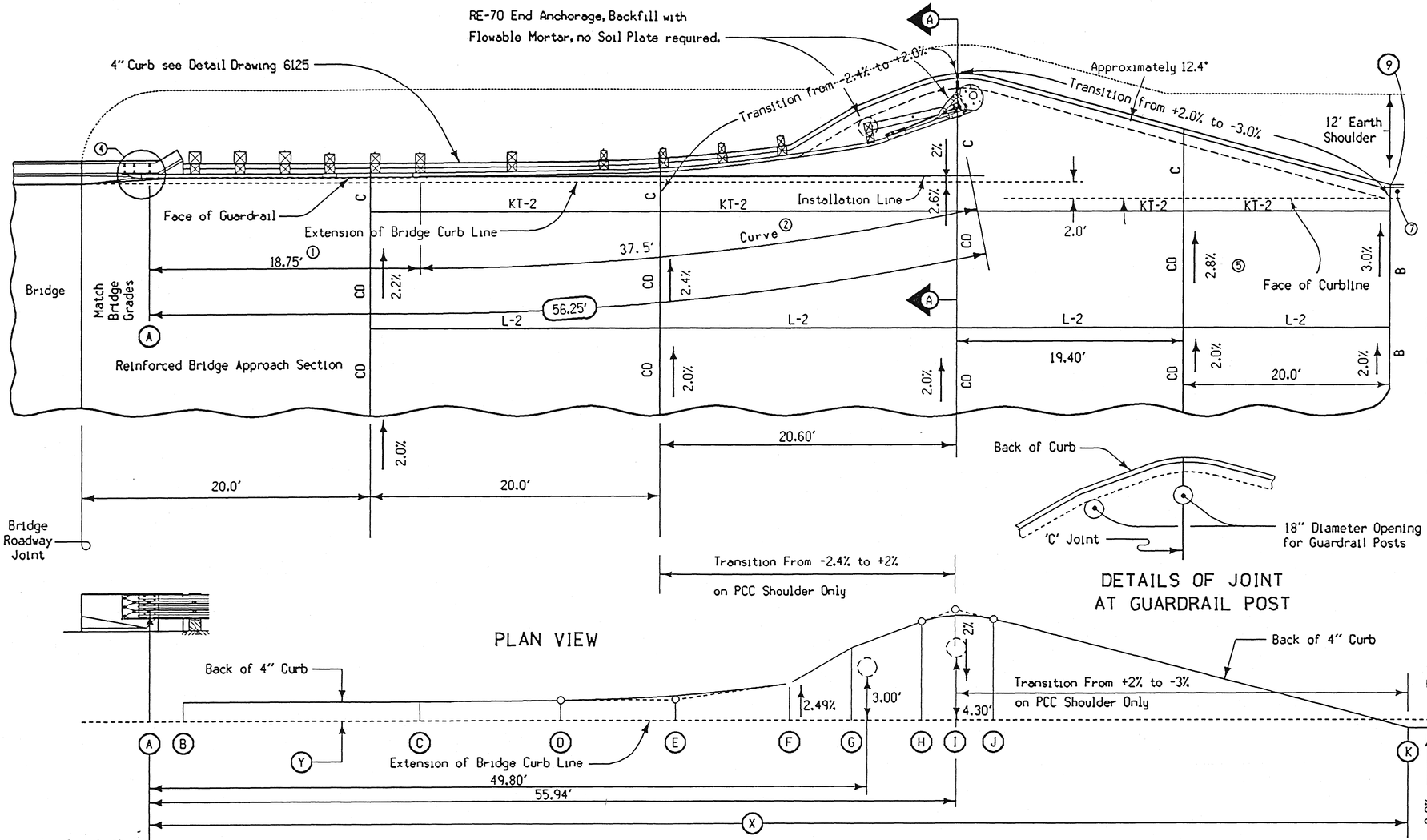
51



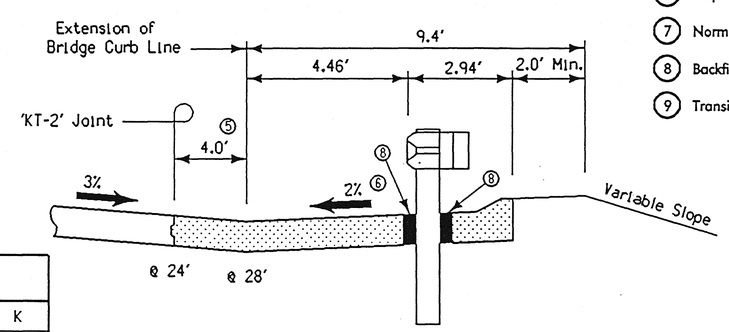
DETAILS OF JOINT AT GUARDRAIL POST

PLAN VIEW

BACK OF CURB LAYOUT DETAIL

CURVE DATA for Curve "E"	
Δ	7.33°
D	45.8°
L	16.0'
E	0.26'
R	125.0'

CURVE DATA for Curve "I"	
Δ	35.97°
D	723.7°
L	4.97'
E	0.41'
R	7.89'



SECTION A-A

BACK OF CURB P. I. LOCATION OFFSETS											
POINTS are P.I. of Curves	A	B	C	D	E	F	G	H	I	J	K
(X) Distances from Point (A) to Points on the Back of Curb	0	2.33'	18.78'	28.45'	36.47'	44.40'	48.72'	53.58'	55.86'	58.47'	95.33'
(Y) Distances from Bridge Curb Line to Back of Curb	-	1.33'	1.33'	1.41'	1.48'	2.57'	5.08'	6.95'	7.40'	7.12'	*

* The intersection of 4" curb and 6" sloped curb.

GENERAL NOTES:

Details indicated hereon are for the construction of a 4" curbed gutter section in the bridge approach area. This detail also includes the location of the steel beam guardrail and transverse joints in the bridge approach area. Refer to project plans including Tabulation of Beam Guardrail as well as other Standard Road Plans for additional requirements for individual installations. See cross sections and 20 scale for additional details.

Horizontal and vertical alignment of the guardrail in the area immediately adjacent to the bridge or the concrete barrier rail shall, where necessary, be adjusted to a smoothly curved line with no abrupt changes. Appropriate adjustment in method of installation shall be made for curved roadways, skewed bridges, or other conditions not shown. Exact details of the installation shall be as directed by the engineer.

Guardrail shall be lapped towards the structure.

The price bid for contract items shall be considered full compensation for furnishing all materials and constructing guardrail essentially as indicated hereon.

Contract items for guardrail construction are:
- Portland Cement Concrete (50 Sq. Yds.)
- Formed Steel Thrie Beam Guardrail
- Formed Steel Beam Guardrail
- Beam Guardrail Posts
- RE-70(1),(2) and (3) Beam Guardrail End Anchorages
- RE-69 Beam Guardrail End Anchorages
- Type 3 Object Markers

1. Standard Transistion Section, this section includes 2 – 12.5' elements of Thrie Guardrail (Nested) and "W" to Thrie Beam Transition Section. Refer to Standard Road Plan RE-68.
2. For curve offsets refer to Standard Road Plan RE-70(1),(2) and(3)
3. For earth shaping at barrier, see Standard Road Plan RL-11.
4. For connections to Bridge End Post or Concrete Barrier End Sections, see Standard Road Plan RE-69 or RE-27B.
5. Form 4' minimum boxout from the reinforced bridge section to the location of the curb taper.
6. Slope shall be 2% unless otherwise specified.
7. Normal curb may be 6" Standard or 6" Sloped Curb.
8. Backfill with Flowable Mortar (To be Incidental)
9. Transition to Meet Curb and Gutter Unit.

For object marker and delineator placement, see Standard Road Plan RE-48A.

For additional information see Standard Road Plans and Tabulations as follows: RE-2A, RE-2B, RE-12A, RE-12B, RE-68, RE-69, RE-70(1),(2)&(3), RL-14, 104-23, 108-8A.

MODIFIED GUARDRAIL INSTALLATION AND CURB ALIGNMENT AT BRIDGE APPROACH

OFFICE OF DESIGN • CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	HUMBOLDT	COUNTY	PROJECT NUMBER	NHS-F-169-7(35)- -19-46	SHEET NUMBER	U.01

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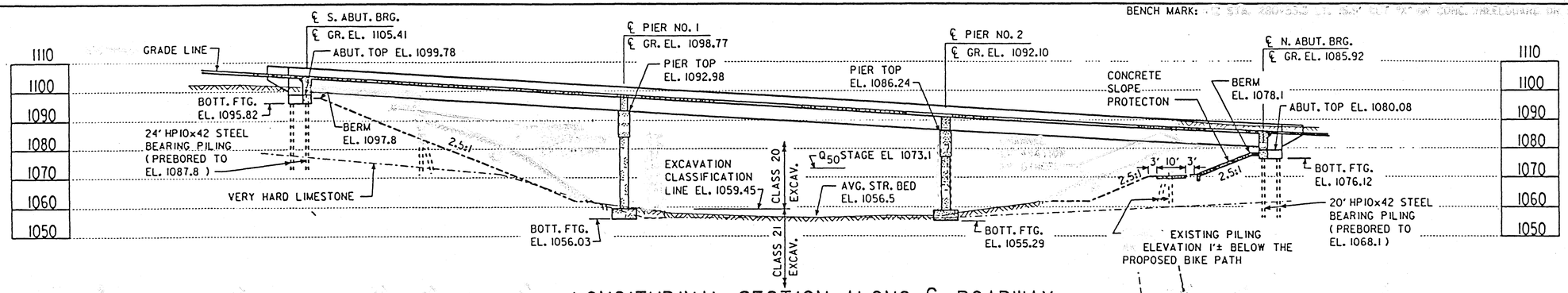
BENCH MARK:



LONGITUDINAL SECTION ALONG ℄ ROADWAY

PROFILE

-6.00% -0.40%

PI STA 284+36.43 VC = 300'
PI ELEV 1080.65

PROPOSED GRADE ON US #169

HYDRAULIC DATA

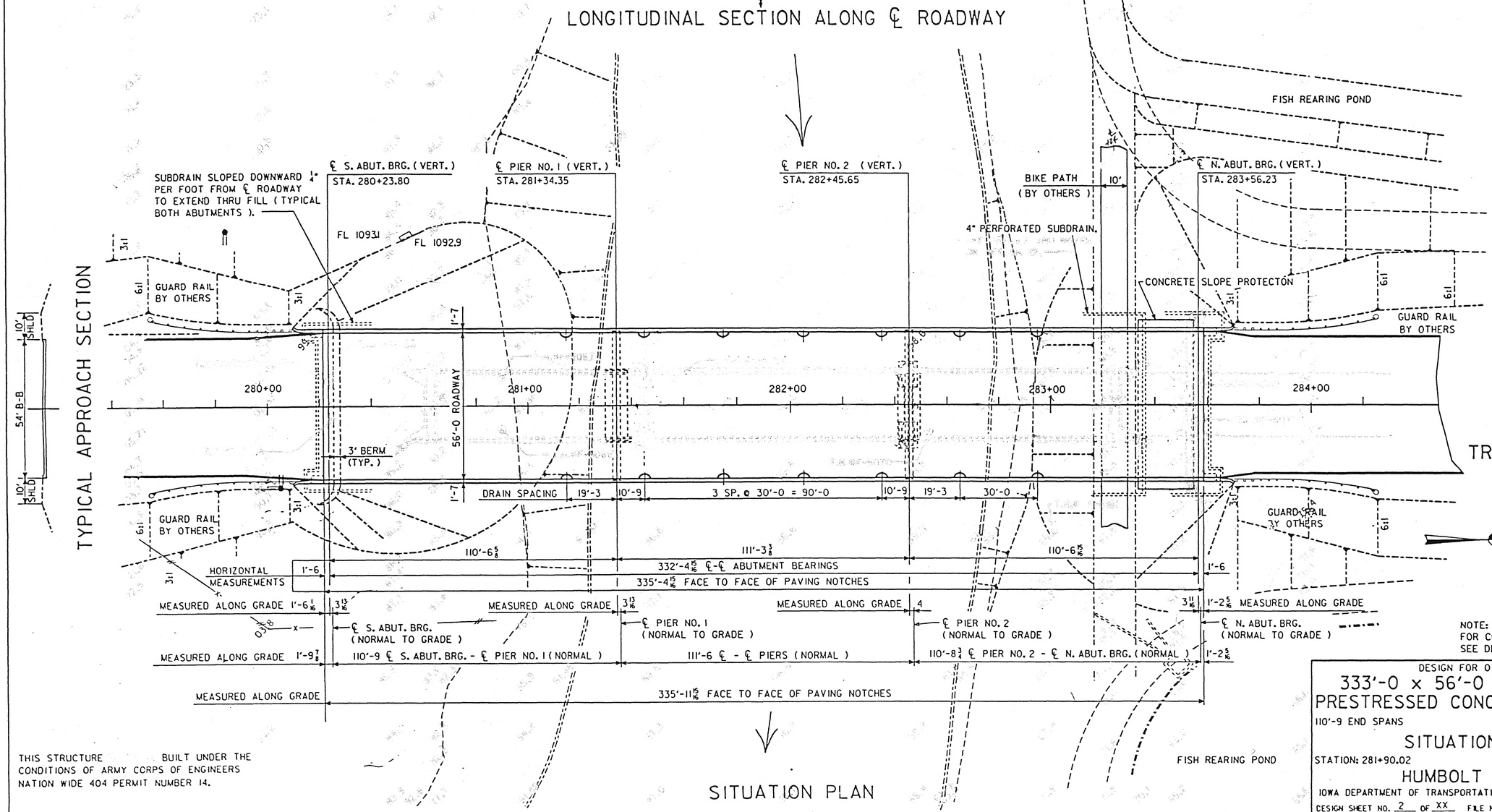
DRAINAGE AREA= 2256 SQ MILES
STREAM SLOPE= 2.64 FT./MI.

Q50= 16,900 CFS
NATURAL STAGE= 1073.1

Q100 = 19,400 CFS
NATURAL STAGE= 1074.1

Q500= 25,690 CFS
STAGE W/BACKWATER= 1176.8

EXTREME HW STAGE=1073.9
DATE= APRIL 14,1969



SITUATION PLAN

TYPICAL APPROACH SECTION

LOCATION

U.S. NO. 169
OVER WEST FORK
DES MOINES RIVER
T 91 N R 29 W
SECTION 1 & 2
CORINTH TOWNSHIP
HUMBOLDT COUNTY

TRAFFIC ESTIMATE

1991: 6,320 VPD
2011: 8,090 VPD
11% TRUCKS

NOTE:
FOR CONDUIT AND LIGHTING DETAILS SEE DES. SHS. 19 & 20.

THIS STRUCTURE BUILT UNDER THE CONDITIONS OF ARMY CORPS OF ENGINEERS NATION WIDE 404 PERMIT NUMBER 14.

DESIGN FOR 0° SKEW

333'-0 x 56'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

110'-9 END SPANS 111'-6 CENTER SPAN

SITUATION PLAN

STATION: 281+90.02 JUNE 1996

HUMBOLT COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - PROJECT DEVELOPMENT DIVISION

DESIGN SHEET NO. 2 OF XX FILE NO. 26188 DESIGN NO. 196

DESIGNED BY CARL SCHUMANN CHECKED BY
DETAILED BY DOUG WARRINGS CADD FILE H460196.S01

HUMBOLT COUNTY

PROJECT NUMBER	STATE	FEDERAL REGION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NHS-F-169-7(35)- -19-46	IOWA	7		V.01	

D1