

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, DRAINAGE, AGGREGATE BASE, BITUMINOUS SURFACING, CURB & GUTTER, SIGNAL SYSTEMS, AND SIDEWALK.

LOCATED ON C.S.A.H. 1 BETWEEN 893' S. OF MISSISSIPPI BLVD. AND 35' S. OF S. RAMP TH 610 IN THE CITIES OF COON RAPIDS AND FRIDLEY (GEOGRAPHIC DESCRIPTION)

FROM A POINT 962.911' NO. & 3888.706' W. OF TO A POINT 569.396' SO. & 591.634' W. OF (LEGAL DESCRIPTION)
 THE E. 1/4 COR. OF SEC. 3, T30 N, R24 W. THE NE. COR. OF SEC. 35, T31 N, R24 W.

| | | |
|---------------------------------------|---------------------------------------|--------------------------------------|
| STATE PROJ. NO. 02-601-35 | STATE AID PROJ. NO. 114-020-06 | STATE AID PROJ. NO. 127-020-15 |
| GROSS LENGTH 7327.00 FEET 1.388 MILES | GROSS LENGTH 7059.00 FEET 1.337 MILES | GROSS LENGTH 837.00 FEET 0.159 MILES |
| BRIDGES-LENGTH FEET MILES | BRIDGES-LENGTH FEET MILES | BRIDGES-LENGTH FEET MILES |
| EXCEPTIONS-LENGTH FEET MILES | EXCEPTIONS-LENGTH FEET MILES | EXCEPTIONS-LENGTH FEET MILES |
| NET LENGTH 7327.00 FEET 1.388 MILES | NET LENGTH 7059.00 FEET 1.337 MILES | NET LENGTH 837.00 FEET 0.159 MILES |

MINN. PROJ. NO. STP 0295 (240)

MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE MAY 2, 1994 SUPPLEMENTAL SPECIFICATIONS SHALL GOVERN.

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THIS PLAN CONTAINS 85 SHEETS

DESIGN DESIGNATION

| | |
|---------------------|-----------|
| EN18 ₂₀ | 2,838,169 |
| R VALUE | 65 |
| ADT (1995)= | 15,912 |
| Proj. ADT (2015)= | 27,050 |
| Proj. HCADT (2015)= | 1,974 |
| Soil Factor | N/A |
| 10 TON DESIGN | |
| Shoulder Width | 8 FT. |

Functional Classification ARTERIAL-HIGH DENSITY
 No. of Traffic Lanes 4 No. of Parking Lanes 0
 Design Speed 50 MPH
 Based on Stopping Sight Distance
 Height of eye 3.5 Height of object 0.5
 Design Speed not achieved at: N/A

| | | |
|------------|---------------|-----------|
| STA. _____ | TO STA. _____ | MPH _____ |
| STA. _____ | TO STA. _____ | MPH _____ |
| STA. _____ | TO STA. _____ | MPH _____ |

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 12/8/94 REG. NO. 20235 ENGR. Joseph J. Timpane DESIGN ENGINEER

DESIGN SQUAD K. JOHNSON AND M. NAJI

| | | |
|--------------------------|---------------------------|------------|
| Recommended for Approval | <u>Michael R. Kelly</u> | 12/8, 1994 |
| Recommended for Approval | <u>Michael Kelly</u> | 12/9, 1994 |
| Recommended for Approval | <u>Samuel Johnson</u> | 12/9, 1994 |
| Approved Dec. 8, 1994 | <u>Joseph J. Timpane</u> | 1994 |
| Approved Dec. 9, 1994 | <u>William R. O'Meara</u> | 1994 |
| Approved Dec. 9, 1994 | <u>William R. O'Meara</u> | 1994 |
| Recommended for Approval | <u>Mary O'Meara</u> | 12/14/1994 |
| Recommended for Approval | <u>Steve B. Kuback</u> | 4/21, 1995 |
| Recommended for Approval | <u>Steve B. Kuback</u> | 4/24, 1995 |
| Approved 4/25, 1995 | <u>Paul J. Timpane</u> | 1995 |

PLAN SYMBOLS

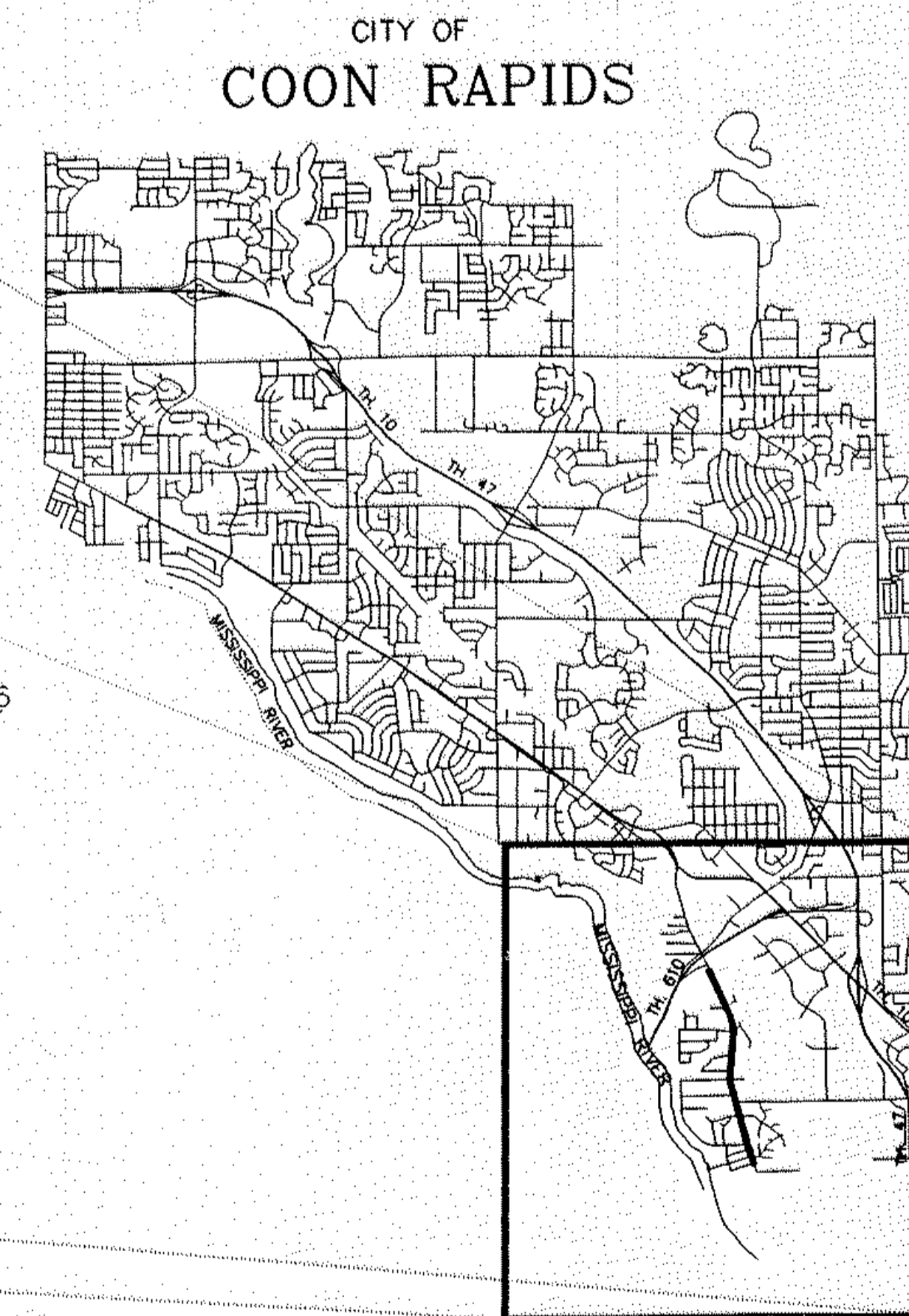
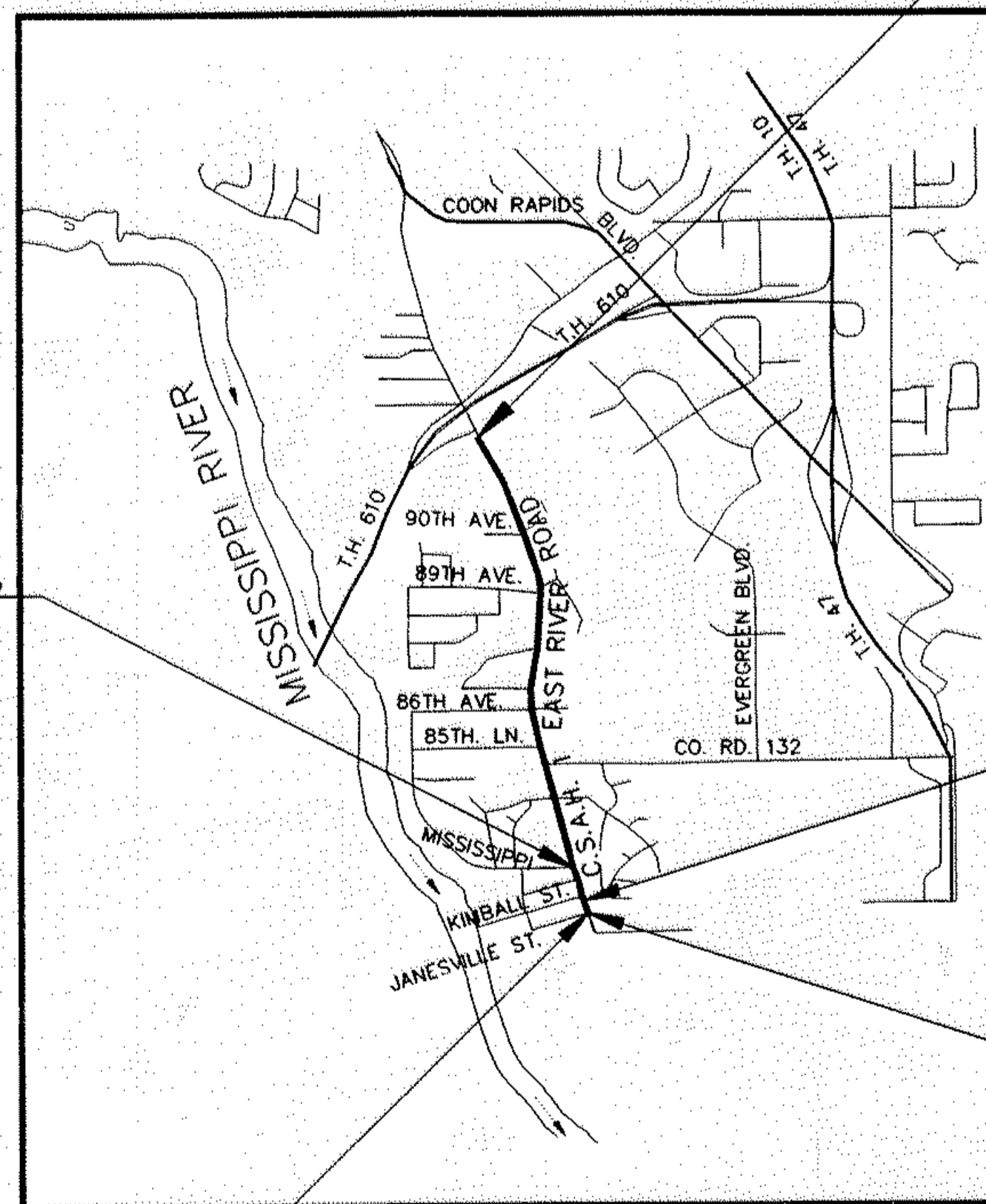
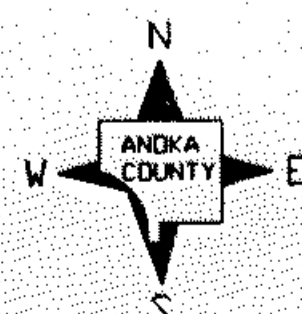
| | |
|----------------------------|-------|
| COUNTY LINE | ----- |
| TOWNSHIP OR RANGE LINE | ----- |
| SECTION LINE | ----- |
| QUARTER LINE | ----- |
| SIXTEENTH LINE | ----- |
| RIGHT OF WAY LINE | ----- |
| SLOPE EASEMENT | ----- |
| PRESENT RIGHT OF WAY | ----- |
| PROPERTY LINE | ----- |
| CORPORATE OR CITY LIMITS | ----- |
| RETAINING WALL | ----- |
| RAILROAD | ----- |
| RAILROAD RIGHT OF WAY | ----- |
| RIVER OR CREEK | ----- |
| DRAINAGE DITCH | ----- |
| CULVERT | ----- |
| DROP INLET | ----- |
| GAURD RAIL | ----- |
| BARBED WIRE FENCE | ----- |
| WOVEN WIRE FENCE | ----- |
| CHAIN LINK FENCE | ----- |
| WOOD FENCE | ----- |
| STONE WALL OR FENCE | ----- |
| HEDGE | ----- |
| LOWLAND | ----- |
| TIMBER | ----- |
| ORCHARD | ----- |
| BRUSH | ----- |
| NURSERY | ----- |
| CATTLE GAURD | ----- |
| OVERPASS (Highway Over) | ----- |
| UNDERPASS (Highway Under) | ----- |
| BRIDGE | ----- |
| BUILDING (One Story Frame) | ----- |
| F-FRAME C-CONCRETE | ----- |
| S-STONE T-TILE | ----- |
| B-BRICK ST-STUCCO | ----- |
| RAILROAD CROSSING BELL | ----- |
| RAILROAD CROSSING GATE | ----- |
| MANHOLE | ----- |
| CATCH BASIN | ----- |
| FIRE HYDRANT | ----- |
| CAST IRON MONUMENT | ----- |
| IRON PIN | ----- |
| GRAVEL PIT | ----- |
| SAND PIT | ----- |
| BORROW PIT | ----- |
| ROCK QUARRY | ----- |

UTILITY SYMBOLS

| | |
|--|-------|
| POWER POLE LINE | ----- |
| TELEPHONE OR TELEGRAPH POLE LINE | ----- |
| JOINT TELEPHONE & POWER ON POWER POLES | ----- |
| DN TELEPHONE POLES | ----- |
| ANCHOR | ----- |
| STEEL TOWER | ----- |
| STREET LIGHT | ----- |
| PEDESTAL (Cable Terminal) | ----- |
| GAS MAIN | ----- |
| WATERMAIN | ----- |
| TELEPHONE CABLE IN CONDUIT | ----- |
| ELECTRIC CABLE IN CONDUIT | ----- |
| TELEPHONE MANHOLE | ----- |
| ELECTRIC MANHOLE | ----- |
| BURIED TELEPHONE CABLE | ----- |
| BURIED ELECTRIC CABLE | ----- |
| AERIAL TELEPHONE CABLE | ----- |
| SEWER (Sanitary or Storm) | ----- |
| SEWER MANHOLE | ----- |

SCALES

| | |
|------------|--|
| PLAN | |
| PROFILE | |
| HORIZONTAL | |
| VERTICAL | |
| X-SECTIONS | |
| HORIZONTAL | |
| VERTICAL | |
| INDEX MAP | |



| REVISIONS | DATE | BY |
|-----------|------|----|
| | | |
| | | |
| | | |

STATE AID PROJ. NO. 127-020-15 AND 114-020-06
 STATE PROJ. NO. 02-601-35 SHEET NO. 1 OF 85 SHEETS

STATEMENT OF ESTIMATED QUANTITIES

NOTES

Fed. Project No.

Main table with columns: CHART NO., ITEM NO., ITEM, UNIT, EST. TOTAL, FINAL, ANOKA COUNTY, CITY OF COON RAPIDS, CITY OF FRIDLEY, STORM SEWER. Includes various construction items like curb stops, valves, pipes, and pavement.

- 1 INCLUDES ALL TYPES AND SIZES.
2 INCLUDES 24 SQ. YD. FOR BITUMINOUS FLUME REMOVAL AND 6 SQ. YD. FOR CONCRETE FLUME REMOVAL.
3 LOCATED INDEX FOR TABULATION CHART.
4 LOCATED AT COON RAPIDS PARK PARKING LOT AND BINDER COURSE.
5 WEAR TRASH GUARD ASSEMBLY BASE.
6 DRAINAGE CONTROL STRUCTURE.
7 FOR CHANGING EXCAVATION AND REALIGNMENT APPLIED.
8 FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
9 FOR SOUTH PROJECT TERMINIZED CONSTRUCT SMOOTH TRANSITION.
10 FOR BUS PAD CONSTRUCTION ALL SEED AND SOD AREAS.
11 FOR DRIVEWAY CONSTRUCTION AS SEE CHART (D) FINAL MEASUREMENT.
12 FOR TEMP TRENCH REPAIRS AS DIRECTED BY THE ENGINEER TO ACCOMMODATE STATION STAGING AND PILES SEWER CONSTRUCTION.
13 QUANTITY INCLUDES ADDING 1/2" THICKNESS TO THE PLANNED QUANTITY.
14 INCLUDES PIPE JOINT TIE TO BE CULVERT.
15 SANITARY SEWER MANHOLE CONCRETE PIPE.
16 100' SERVICE CONNECTION FOR R.C. PIPE.
17 12" COPPER SERVICE.
18 WATERMAIN IN EXCAVATION IN PARAS OF EXCESSIVE PROFILE LOWERING.
19 INCLUDES MANHOLE ADJUSTS TO ALL MANHOLES CASTINGS IN DESIGN.
20 TRAFFIC LANE FOR CONSTRUCTION GRADING RING.
21 FOR RECONSTRUCTION AND ADJUSTMENT OF SANITARY MANHOLES.
22 FOR USE ALONG GUARDRAIL FOR MANHOLE.
23 PRIVATE ENTRANCE CONSTRUCTION INCLUDING APRONS.
24 COMMERCIAL ENTRANCE CONSTRUCTION INCLUDING APRONS.
25 COON RAPIDS WELCOMING BASIN STEP.
26 CONCRETE WALK & GUTTER RETURNS AT ENTRANCES.
27 STATE STANDARD FOR SEWERABLE SHEET PILING (35+50 LNB).
28 FOR EROSION CONTROL AT DRAINAGE STRUCTURES AND AS DIRECTED BY THE ENGINEER.
29 FOR EROSION CONTROL ALONG TOE-OF-SLOPE OF CATCH BASIN CASTINGS BY THE ENGINEER.
30 FOR TEMP LANE MARKINGS AS SHOWN FOR STAGE 3.
31 TRAFFIC CONTROL AND TEMPORARY LANE MARKINGS (ON WEAR SURF).
32 COURSE PRIOR TO FINAL STRIPING.
SEE TRAFFIC SIGNAL PLAN SHEETS FOR ADDITIONAL STANDARD PLATES.

REVISIONS BY DATE

CONCRETE CURB AND GUTTER (P)

Table with 5 columns: STATION TO STATION, LOCATION, B-612 LIN. FT., B-418 LIN. FT., B-618 LIN. FT., REMARKS. Lists construction details for concrete curb and gutter along various stationing points.

CONCRETE PEDESTRIAN RAMPS (S)

Table with 4 columns: STA., LOCATION, EACH, REMARKS. Lists details for concrete pedestrian ramps at various stationing points.

CONCRETE MEDIAN CONSTRUCTION (V)

Table with 4 columns: STATION TO STATION, SQ. FT., REMARKS. Lists details for concrete median construction along various stationing points.

STONE RETAINING WALL (W)

Table with 5 columns: STATION TO STATION, SQ. FT., LIN. FT., REMARKS. Lists details for stone retaining wall construction along various stationing points.

5' CONCRETE WALK (T)

Table with 6 columns: STATION TO STATION, LOCATION, 4' CONC. SQ. FT., 6' CONC. SQ. FT., REMARKS. Lists details for 5-foot concrete walkways along various stationing points.

MEDIAN NOSE LOCATION (Q)

Table with 6 columns: NO., STATION, RAD., OFFSET, DESCRIPTION, TYPE. Lists details for median nose locations along various stationing points.

TURF ESTABLISHMENT (R)

Table with 7 columns: STATION TO STATION, LOC./DESC., SODDING SQ. YDS., SEEDING ACRES, SEED POUND, MULCH TON, FERTILIZER POUND. Lists details for turf establishment along various stationing points.

GUARDRAIL CONSTRUCTION (X)

Table with 6 columns: STATION TO STATION, LOCATION, DESCRIPTION, LIN. FT., EACH. Lists details for guardrail construction along various stationing points.

DRAINAGE CASTING SCHEDULE (Y)

Table with 6 columns: ASSEMBLY TYPE, NO. REQD., FRAME CASTING, GRATE CASTING, CURB BOX CASTING, RING CASTING, COVER CASTING. Lists details for the drainage casting schedule.

CONCRETE BUS PAD LOCATION (U)

Table with 5 columns: NO., STATION TO STATION, LOCATION, SQ. YD., DESCRIPTION. Lists details for concrete bus pad locations along various stationing points.

TABULATION CHARTS

- CONCRETE CURB AND GUTTER
MEDIAN NOSE LOCATION
TURF ESTABLISHMENT
CONCRETE PEDESTRIAN RAMPS
5' CONCRETE WALK
CONCRETE BUS PAD LOCATION
CONCRETE MEDIAN CONSTRUCTION
STONE RETAINING WALL
GUARDRAIL CONSTRUCTION
DRAINAGE CASTING SCHEDULE

CERTIFIED BY Louise M. ...

P. E. REG NO. 20235 3/22 19 95

S. P. 02-601-35 S. A. P. 114-020-06 127-020-15 C. P.

Sheet No. 7 of 85 Sheets

REVISIONS DATE BY 7-9-95 K. J.

FILE NAME: P:\0260135\TAB-GR.DWG MK (02-07-95)

EARTHWORK SUMMARY

(2)

Fed. Project No. _____

EXCAVATION (2)

EMBANKMENT (CV)

BALANCE

TOPSOIL
 TOPSOIL DRESSING (CV) - [TOPSOIL STRIPPING (EV) x SHRINKAGE FACTOR] - [EXCESS(-) OR SHORTAGE(+)]
 3521 - (6106 x 0.85) = 1669 EXCESS

SELECT GRANULAR BORROW
 REGULAR FILL (LV) - [REGULAR EXCAVATION (EV) x SHRINKAGE FACTOR] - [SUBCUT EXCAVATION x SHRINKAGE FACTOR] = EXCESS(-) OR SHORTAGE(+)
 33,141 - [(26,443 - 12,495) x 0.85] - (19,582 x 0.90) = 3,661 SHORT
 BORROW = (CV) + SWELL FACTOR = 3,661 x 1.2 = 4,393 CU.YD. (LV)

COMMON EXCAVATION . . . 52,131 CU.YD. {
 REGULAR . . . 26,443 CU.YD. (1)
 SUBCUT . . . 19,582 CU.YD.
 TOPSOIL . . . 6,106 CU.YD.

REGULAR . . . 33,141 CU.YD. {
 GRANULAR . . . 13,559 CU.YD.
 SUBCUT . . . 19,582 CU.YD.
 TOPSOIL . . . 3,521 CU.YD.

- (1) INCLUDES 12,495 CU. YD. CONCRETE AND BITUMINOUS REMOVAL. CONCRETE AND BITUMINOUS PAVEMENT REMOVALS WILL BE PAID UNDER ITEM 2104.
- (2) INCLUDES 1,764 CU.YD. FOR RETENTION POND EXCAVATION AND 2,219 CU.YD. FOR DITCH EXCAVATION ALONG CO. RD. 132.

SOIL FACTORS:

- (1) REGULAR GRADING AND TOPSOIL DRESSING (EV TO CV): 85% SHRINKAGE
- (2) SUBCUT COMPACTION (EV TO CV): 90% SHRINKAGE
- (3) SELECT GRANULAR BORROW (CV TO LV): 120% SWELL

SOILS AND CONSTRUCTION NOTES:

1. TOP OF GRADING GRADE IS DEFINED AS THE BOTTOM OF THE AGGREGATE BASE.
2. IN FILL AREAS, THE SUBGRADE SHALL BE CONSTRUCTED WITH SELECTED GRADING MATERIAL.
3. SELECTED GRADING MATERIALS SHALL CONSIST OF SELECT GRANULAR MATERIALS.
4. GRANULAR MATERIAL, REGARDLESS OF SOURCE, SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B.
5. COMPACTION OF THE GRADING PORTION OF THIS PROJECT SHALL BE BY THE "SPECIFIED DENSITY METHOD".
6. TEST ROLLING WILL NOT BE REQUIRED.
7. BITUMINOUS OR CONCRETE ITEMS REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE EITHER RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF 2104.3C3.
8. DISPOSITION OF EXCESS EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 2105.3D WITH NO DIRECT COMPENSATION THEREFORE.
9. WHERE MATCHING INTO THE INPLACE ROADWAY AT THE ENDS OF CONSTRUCTION, CUT VERTICALLY TO THE TOP OF THE GRADING GRADE, AND THEN AT A 20:1 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
10. WHERE CONNECTING NEW SURFACING TO AN INPLACE PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING THE INPLACE PAVEMENT.
11. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES PRIOR TO PLACING BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING CONCRETE OR BITUMINOUS SURFACES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT UNIFORM RATE OF 0.03 TO 0.05 GALLONS PER SQUARE YARD BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE FOR UNDILUTED EMULSION (AS SUPPLIED FROM THE REFINERY); ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357.
12. COMPACTION OF ALL OF THE BITUMINOUS COURSES SHALL BE BY THE "MODIFIED SPECIFIED DENSITY METHOD".
13. COMPACTION OF THE AGGREGATE BASE LAYERS SHALL BE BY THE "SPECIFIED DENSITY METHOD".
14. PLACE MINIMUM 4 INCHES TOPSOIL OR SLOPE DRESSING ON ALL AREAS DISTURBED BY CONSTRUCTION AND SCHEDULED FOR PERMANENT TURF ESTABLISHMENT. FERTILIZE WITH COMMERCIAL FERTILIZER, ANALYSIS 10-10-10, AT A RATE OF 500 POUND PER ACRE.
15. USE MIXTURE 600 SEED AND TYPE 1 MULCH IN AREAS TO BE SEED.
16. SOD ALL PERMANENT BOULEVARD AREAS.
17. ALL SOD UTILIZED WITHIN THE PROJECT LIMITS SHALL MEET THE REQUIREMENTS OF SPEC. 3878.2A (LAWN AND BOULEVARD SOD).
18. ORGANIC AND NONGRANULAR EXCAVATED MATERIAL MAY BE USED IN EMBANKMENT CONSTRUCTION IN AREAS OUTSIDE OF A 1 1/2:1 SLOPE FROM THE BACK OF CURB, OR GRADING P.I.
19. BITUMINOUS REMOVAL QUANTITY BASED ON SQUARE YARDS REMOVED. IN PLACE SURFACE ASSUMED TO BE 8 INCHES IN DEPTH. CONTRACTOR SHALL INVESTIGATE AND MAKE OWN DETERMINATION OF ACTUAL PAVEMENT DEPTH.

BASE AND BITUMINOUS QUANTITIES CHART (AA)

| LOCATION | DESCRIPTION | BIT. SURF. SQ.YD. | 1.5" BIT. WEARING C. TON | 2" BIT. BINDER C. TON | 4" BIT. BASE C. TON | 3 LIFTS TACK COATS GALLON | 5" AGG. BASE CLASS 5 SQ.YD. | CU.YD. |
|------------------------|-------------------------------|-------------------|--------------------------|-----------------------|---------------------|---------------------------|-----------------------------|---------|
| LSB 165+38 169+75 | LT. WIDENING AREA | 408 | 33.7 | 50.5 | 95.4 | 61.2 | 496 | 70.1 |
| LNB 166+27 169+75 | TEMP. RIGHT TURN LANE | 501 | 41.3 | 61.9 | 117.0 | 75.1 | 585 | 82.4 |
| LNB 169+75 236+39 | 13'LT. & 12'RT. | 18511 | 1527.2 | 2290.8 | 4327.0 | 2776.7 | 19518 | 2724.8 |
| LSB 169+75 236+65 | 12'LT. & 13'RT. | 18584 | 1533.2 | 2299.8 | 4344.1 | 2787.6 | 19769 | 2762.1 |
| LNB 169+75 172+05 | BUS STOP | 211 | 17.4 | 26.2 | 49.4 | 31.7 | 296 | 42.2 |
| LSB 169+75 172+87 | LEFT TURN LANE | 339 | 28.0 | 42.0 | 79.3 | 50.9 | 408 | 57.6 |
| LSB 169+75 178+24 | RIGHT TURN LANE & BUS STOP | 977 | 80.6 | 120.9 | 228.3 | 146.5 | 1186 | 167.6 |
| LNB 171+55 173+87 | LEFT TURN LANE | 345 | 28.5 | 42.7 | 80.6 | 51.7 | 414 | 58.4 |
| LNB 172+05 180+57 | 6.5' SHOULDER | 615 | 50.8 | 76.1 | 143.8 | 92.3 | 915 | 131.3 |
| LSB 178+24 184+38 | 6.5' SHOULDER | 444 | 36.6 | 54.9 | 103.7 | 66.6 | 660 | 94.7 |
| LNB 180+00 184+66 | LEFT TURN LANE | 490 | 40.4 | 60.6 | 114.4 | 73.4 | 616 | 87.3 |
| LNB 180+57 190+26 | RIGHT TURN LANE | 1168 | 96.3 | 144.5 | 273.0 | 175.2 | 1413 | 199.7 |
| LSB 184+38 211+34 | RIGHT TURN LANE & BUS STOP | 3353 | 276.6 | 414.9 | 783.7 | 502.9 | 11529 | 590.6 |
| LSB 184+66 187+82 | LEFT TURN LANE | 311 | 25.7 | 38.5 | 72.7 | 46.7 | 393 | 55.7 |
| LNB 186+16 189+66 | LEFT TURN LANE | 363 | 29.9 | 44.9 | 84.8 | 54.4 | 480 | 68.3 |
| LSB 189+66 194+80 | LEFT TURN LANE | 563 | 46.4 | 69.7 | 131.6 | 84.4 | 699 | 98.9 |
| LNB 190+26 191+40 | 6.5' SHOULDER | 82 | 6.8 | 10.1 | 19.2 | 12.3 | 122 | 17.5 |
| LNB 191+40 198+88 | RIGHT TURN LANE | 909 | 75.0 | 112.5 | 212.5 | 136.3 | 1106 | 156.4 |
| LNB 193+60 198+62 | LEFT TURN LANE | 517 | 42.7 | 64.0 | 120.9 | 77.6 | 646 | 91.6 |
| LSB 198+62 203+40 | LEFT TURN LANE | 535 | 44.1 | 66.2 | 125.1 | 80.3 | 667 | 94.5 |
| LNB 198+88 211+60 | 6.5' SHOULDER | 913 | 75.3 | 113.0 | 213.5 | 137.0 | 1360 | 195.1 |
| LNB 202+36 207+89 | LEFT TURN LANE | 133 | 11.0 | 16.4 | 31.0 | 19.9 | 264 | 38.5 |
| LSB 210+34 215+37 | 6.5' SHOULDER | 288 | 23.8 | 35.7 | 67.4 | 43.3 | 429 | 61.5 |
| LNB 210+88 215+49 | LEFT TURN LANE | 539 | 44.4 | 66.6 | 125.9 | 80.8 | 686 | 97.3 |
| LSB 215+49 220+22 | LEFT TURN LANE | 489 | 40.3 | 60.5 | 114.3 | 73.4 | 612 | 86.7 |
| LNB 211+60 215+95 | RIGHT TURN LANE | 510 | 42.1 | 63.1 | 119.2 | 76.5 | 633 | 89.7 |
| LSB 215+37 219+68 | RIGHT TURN LANE | 502 | 41.4 | 62.2 | 117.4 | 75.3 | 619 | 87.6 |
| LNB 215+95 220+55 | 6.5' SHOULDER | 332 | 27.4 | 41.1 | 77.7 | 49.8 | 496 | 71.1 |
| LSB 219+68 222+80 | 6.5' SHOULDER | 225 | 18.6 | 27.9 | 52.7 | 33.8 | 335 | 48.1 |
| LNB 220+00 224+55 | LEFT TURN LANE | 506 | 41.8 | 62.6 | 118.3 | 75.9 | 625 | 88.4 |
| LNB 220+55 224+88 | RIGHT TURN LANE | 507 | 41.8 | 62.8 | 118.6 | 76.1 | 629 | 89.0 |
| LSB 222+80 231+86 | RIGHT TURN LANE & BUS STOP | 1081 | 89.2 | 133.8 | 252.7 | 162.2 | 1251 | 176.2 |
| LSB 224+55 229+22 | LEFT TURN LANE | 500 | 41.3 | 61.9 | 116.9 | 75.0 | 594 | 83.7 |
| LNB 224+88 230+50 | 6.5' SHOULDER | 125 | 10.3 | 15.5 | 29.2 | 18.7 | 324 | 47.7 |
| LSB 228+51 229+76 | 6.5' SHOULDER | 90 | 7.4 | 11.2 | 21.1 | 13.5 | 134 | 19.2 |
| LNB 230+50 232+60 | BUS STOP | 228 | 18.8 | 28.2 | 53.2 | 34.1 | 302 | 43.0 |
| LSB 231+86 236+65 | 6.5' SHOULDER | 346 | 28.5 | 42.8 | 80.9 | 51.9 | 419 | 59.2 |
| LNB 232+60 234+70 | 6.5' SHOULDER | 152 | 12.5 | 18.8 | 35.5 | 22.8 | 226 | 32.4 |
| LNB 234+70 236+39 | BUS STOP | 191 | 15.7 | 23.6 | 44.5 | 28.6 | 330 | 47.7 |
| C/L 0+44 15+20 | SERVICE ROAD (SEE DESIGN F-2) | 2159 | 178.1 | 0.0 | 0.0 | 0.0 | 4257 | 356.4 |
| KIMBALL ST. | FROM SAWCUT TO END RADIUS | 126 | 10.4 | 15.6 | 29.5 | 19.0 | 136 | 19.0 |
| LARCH ST. N.W. | FROM SAWCUT TO END RADIUS | 299 | 24.7 | 37.0 | 69.9 | 44.9 | 309 | 43.0 |
| LAFAYETTE ST. | FROM SAWCUT TO END RADIUS | 143 | 11.8 | 17.7 | 33.5 | 21.5 | 176 | 25.0 |
| MISSISSIPPI BLVD. | FROM SAWCUT TO END RADIUS | 354 | 29.2 | 43.8 | 82.7 | 53.1 | 434 | 61.4 |
| LNB RT. 84TH. LANE NW. | FROM SAWCUT TO END RADIUS | 186 | 15.3 | 23.0 | 43.4 | 27.8 | 227 | 32.1 |
| LSB LT. 84TH. LANE NW. | FROM SAWCUT TO END RADIUS | 181 | 14.9 | 22.4 | 42.3 | 27.2 | 217 | 30.7 |
| CO.RD. 132 | FROM SAWCUT TO END RADIUS | 831 | 68.6 | 102.8 | 194.2 | 124.6 | 969 | 136.6 |
| LSB LT. PARK ENT. | FROM SAWCUT TO END RADIUS | 484 | 39.9 | 59.9 | 113.1 | 72.6 | 537 | 75.3 |
| LSB LT. 85TH. LANE NW. | FROM SAWCUT TO END RADIUS | 186 | 15.3 | 23.0 | 43.4 | 27.8 | 227 | 32.1 |
| LNB RT. NEW ROAD | FROM SAWCUT TO END RADIUS | 117 | 9.7 | 14.5 | 27.4 | 17.6 | 146 | 20.7 |
| LNB RT. 86TH. AVE. NW. | FROM SAWCUT TO END RADIUS | 198 | 16.4 | 24.5 | 46.3 | 29.7 | 236 | 33.3 |
| LSB LT. 86TH. AVE. NW. | FROM SAWCUT TO END RADIUS | 152 | 12.5 | 18.8 | 35.5 | 22.8 | 187 | 26.4 |
| LNB RT. 86TH. LANE NW. | FROM SAWCUT TO END RADIUS | 176 | 14.5 | 21.8 | 41.2 | 26.4 | 215 | 30.3 |
| LSB LT. 87TH. LANE NW. | FROM SAWCUT TO END RADIUS | 213 | 17.5 | 26.3 | 49.7 | 31.9 | 257 | 36.4 |
| LNB RT. 89TH. AVE. NW. | FROM SAWCUT TO END RADIUS | 169 | 13.9 | 20.9 | 39.5 | 25.3 | 206 | 29.1 |
| LSB LT. 89TH. AVE. NW. | FROM SAWCUT TO END RADIUS | 190 | 15.7 | 23.5 | 44.4 | 28.5 | 228 | 32.2 |
| LNB RT. 90TH. AVE. NW. | FROM SAWCUT TO END RADIUS | 136 | 11.2 | 16.8 | 31.7 | 20.3 | 169 | 23.9 |
| LSB LT. 90TH. AVE. NW. | FROM SAWCUT TO END RADIUS | 162 | 13.3 | 20.0 | 37.8 | 24.2 | 200 | 28.2 |
| TOTAL | | 63342 | 5285.1 | 7571.5 | 14301.7 | 9177.5 | 74159 | 10186.1 |

- (1) INCLUDES AN ADDITIONAL 1/4" THICKNESS TO THE PLANNED QUANTITY.
- (2) BASE COURSE TO BE PLACED IN TWO LIFTS.
- (3) TYPICAL DEPTHS ARE LISTED. ACTUAL DEPTHS VARY UNDER AND BEHIND CURB AND GUTTER.

EARTHWORK SUMMARY, CONSTRUCTION NOTES, AND BASE AND BITUMINOUS QUANTITIES CHART

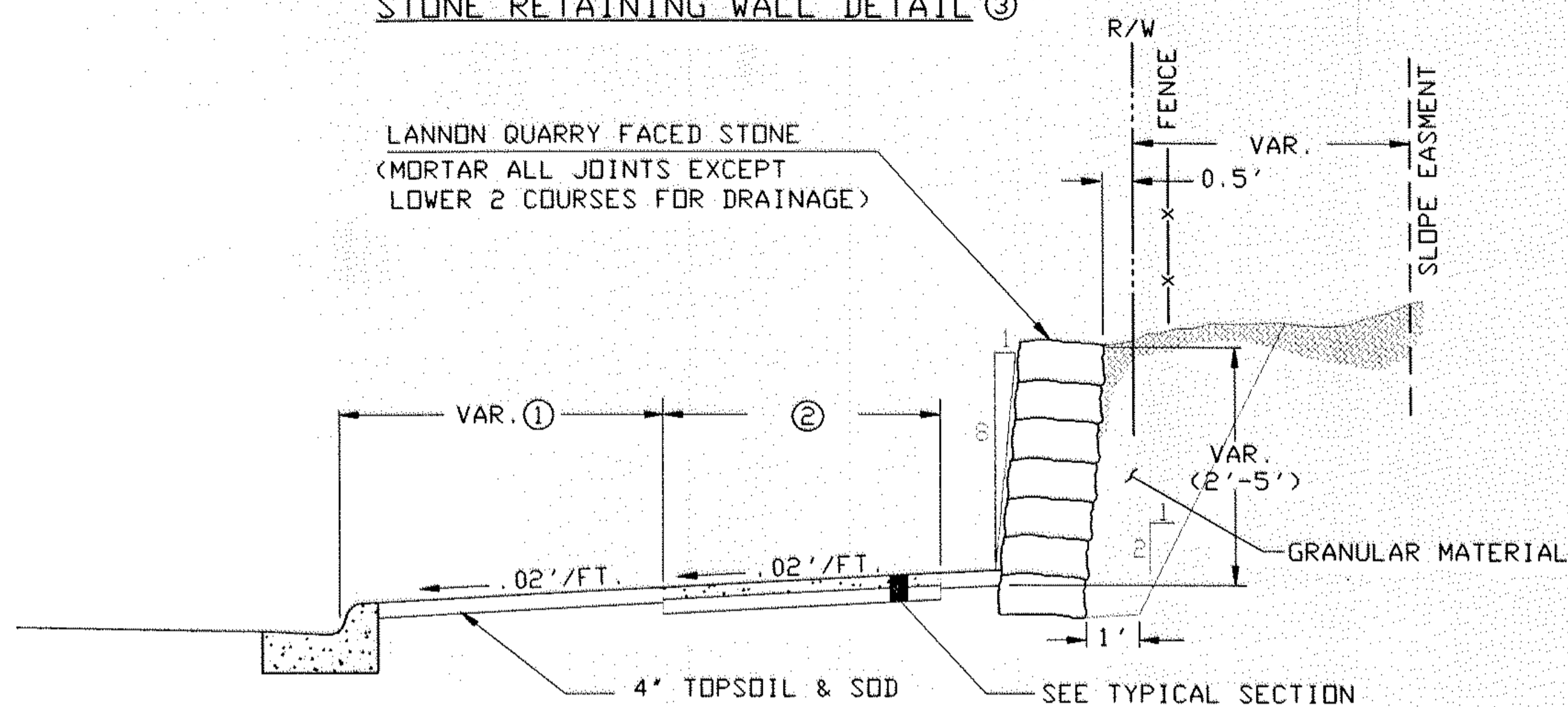
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S.P. 02-601-35 S.A.P. 114-020-06 127-020-15 C.P. _____ Sheet No. 8 of 85 Sheets

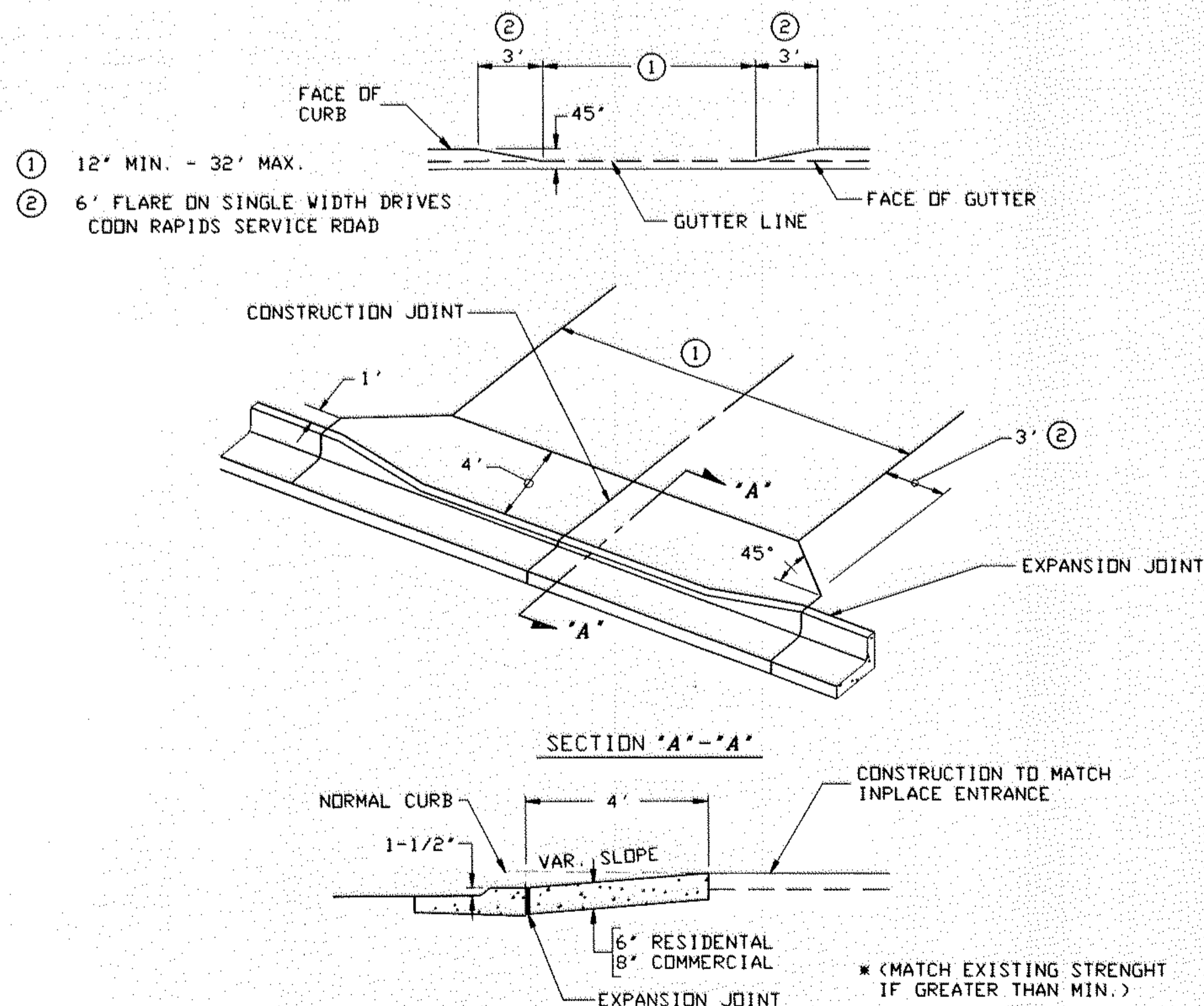
FILE NAME: P:\020135\TAB-CH.DWG MN (08-15-95)

STONE RETAINING WALL DETAIL ③

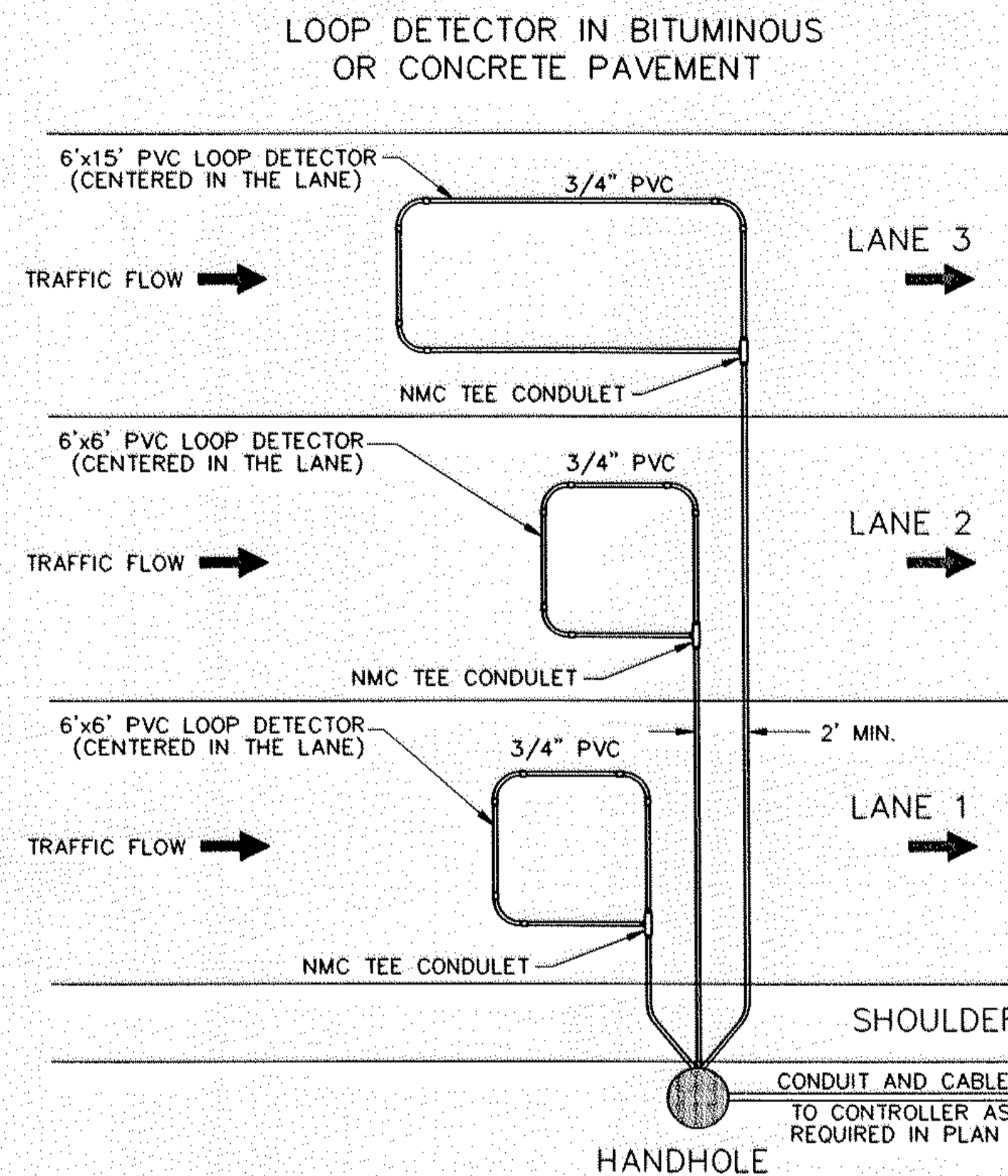


- ① SEE PLANS AND X-SECTION FOR BOULEVARD WIDTHS.
- ② 5' CONC. SIDEWALK OR LAWN BOULEVARD
- ③ SEE TABULATION CHART (W) ON SHEET 7 FOR LOCATIONS.

**CONCRETE APRON DETAIL
COON RAPIDS SERVICE ROAD**



PREFORMED NMC LOOP DETECTOR DETAILS FOR TRAFFIC CONTROL SIGNAL SYSTEM

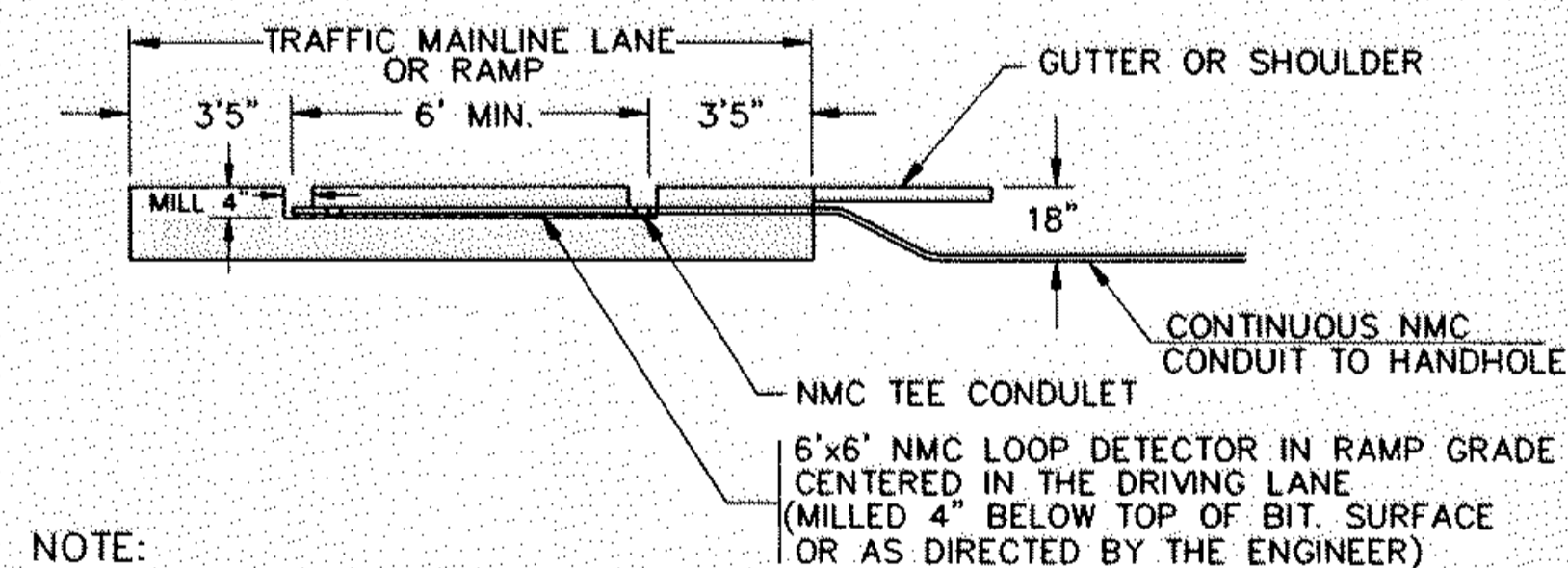


| LOOP DETECTOR TURNS IN BITUMINOUS OR CONCRETE PAVEMENT | | | | |
|--|---------|----------|----------|----------|
| SIZE OF LOOP DETECTOR | 6' x 6' | 6' x 10' | 6' x 15' | 6' x 20' |
| NUMBER OF LOOP DETECTOR TURNS | 5 TURNS | 5 TURNS | 4 TURNS | 4 TURNS |

- 1) THE 3/4" NMC SHALL BE SCHEDULE 40 PVC. SEE SPEC. 3803.
- 2) APPROVED PVC PRIMER CEMENT SHALL BE USED FOR THE PVC JOINTS.
- 3) THREE CORNERS OF EACH LOOP SHALL BE 90° COMMERCIAL MANUFACTURED ELBOWS. THE FOURTH SHALL BE A NMC TEE CONDUIT.
- 4) THE LOOP CONDUCTORS SHALL END IN THE HANDHOLE.
- 5) THE NMC LOOP DETECTORS WITH NEW CONCRETE AND BITUMINOUS PAVEMENT SHALL BE INSTALLED WITH THE TOP OF THE NMC A MAXIMUM OF 12" BELOW TOP OF FINISHED PAVEMENT.
- 6) FOR PLACEMENT OF THE NMC LOOP DETECTORS WITH INPLACE BITUMINOUS PAVEMENT. SEE THE "INSTALLATION OF LOOP DETECTORS IN INPLACE BITUMINOUS PAVEMENT" DETAIL.
- 7) EACH NMC "HOMERUN" SHALL BE SLOPED TO THE HANDHOLE.
- 8) THE LOOP DETECTOR SHALL BE CENTERED ON THE DRIVING LANE.
- 9) SEE SPECIAL PROVISIONS FOR REQUIRED LOOP DETECTOR CONDUCTORS.
- 10) THE LOOP DETECTOR CONDUCTORS (1/C NO.14) SHALL BE TWISTED 3 TURNS PER FOOT FROM THE NMC TEE CONDUIT TO THE HANDHOLE.

BITUMINOUS PAVEMENT

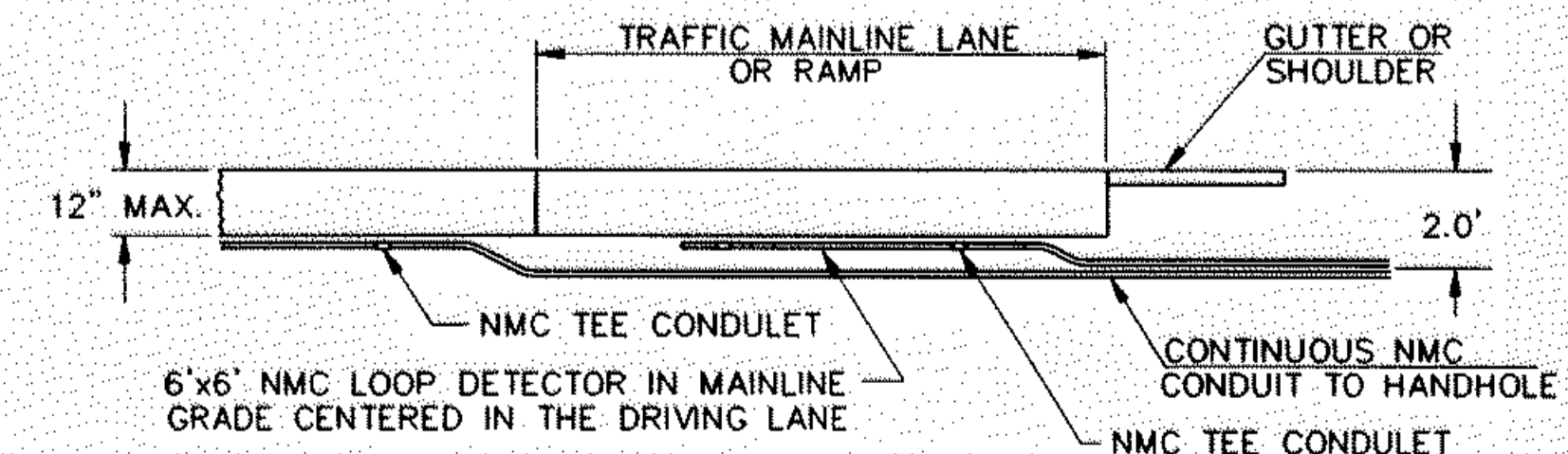
INSTALLATION OF LOOP DETECTORS IN INPLACE BITUMINOUS PAVEMENT



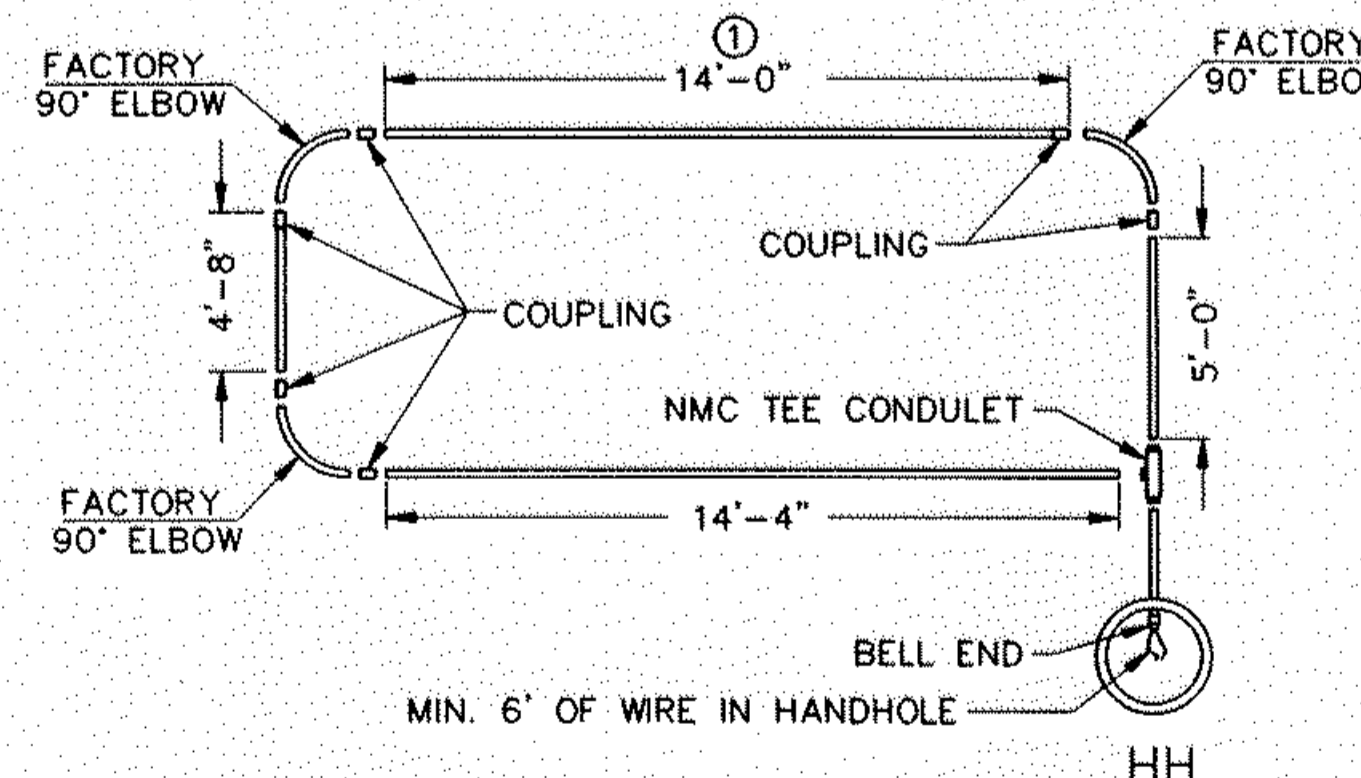
NOTE:

- 1) USE TYPE 41 WEARING COURSE (TYPE 41WEA500X) STANDARD MIX.
- 2) BOTTOM AND EDGES OF MILLED AREA SHOULD BE SPRAYED WITH TACK WITH A HIGH PRESSURE WAND.

INSTALLATION OF LOOP DETECTORS IN NEW CONST. OF BITUMINOUS PAVEMENT



NMC LOOP DETECTOR TYPICAL (6'x 15' LOOP)



- ① THIS DIMENSION VARIES ACCORDING TO LOOP DETECTOR SIZE.

NOTE:

- ① USE 3/4" NMC CONDUIT AND FITTINGS.
- ② ALL FITTINGS MUST BE PRIMED AND CEMENTED.
- ③ NO SPLICES ALLOWED IN TEE OR NMC.

STANDARD DETAILS

ALL OTHER APRONS PER STANDARD PLATES 7035

CERTIFIED BY Douglas M. ...

P.E. REG NO. 20235 3/22 19 95

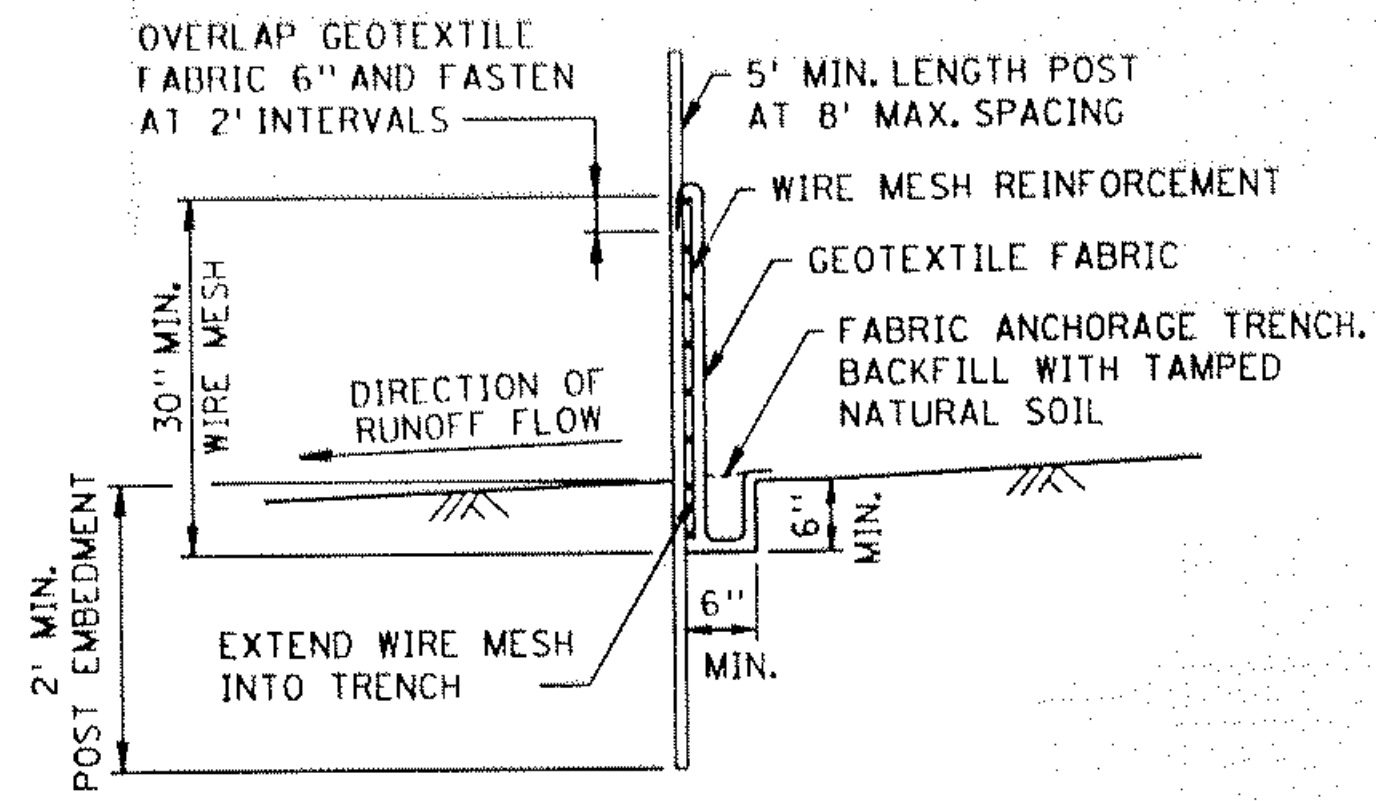
S.P. 02-601-35 S.A.P. 114-020-06 127-020-15

C.P.

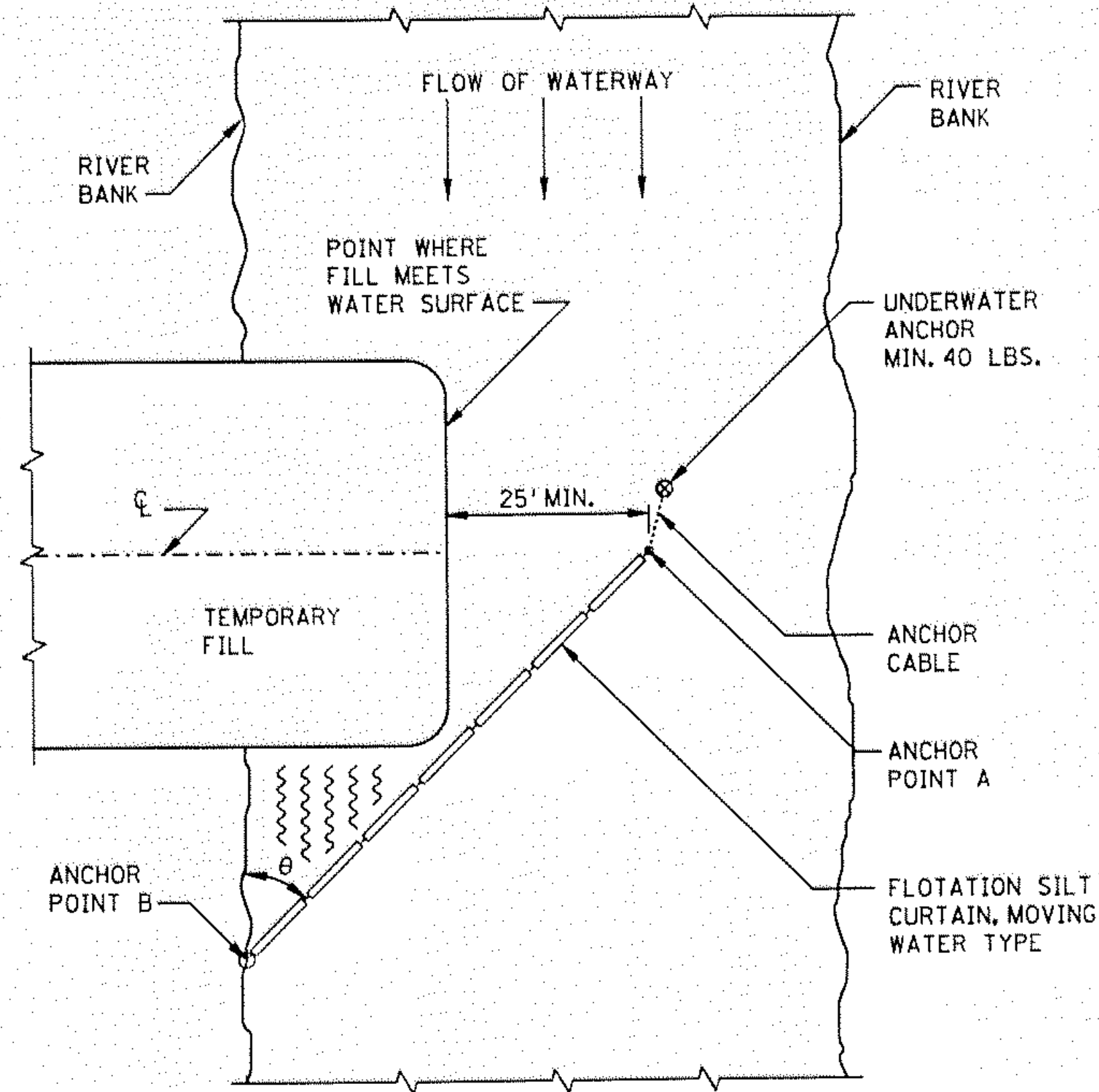
Sheet No. 9 of 85 Sheets

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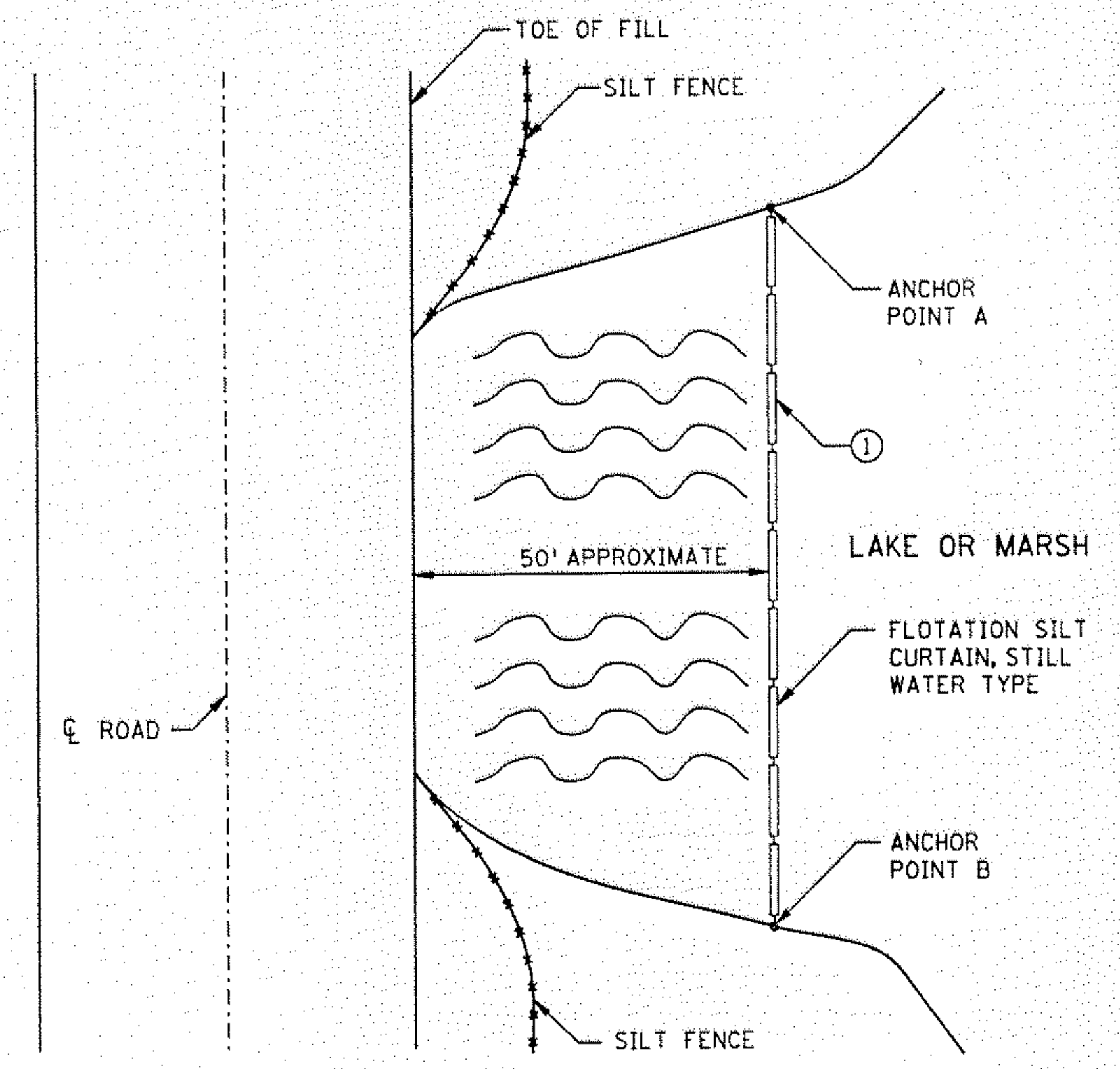


SILT FENCE DETAIL



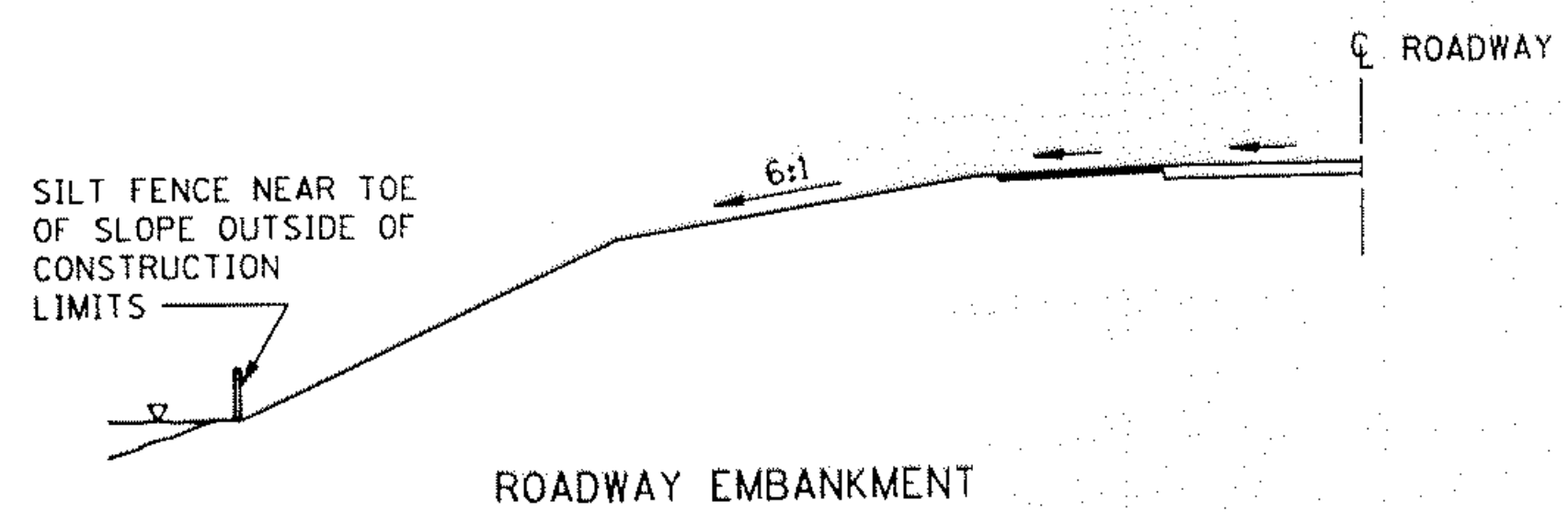
| $\angle \theta$ | RIVER VELOCITY |
|-----------------|----------------------------|
| 45° | SLOW, LESS THAN 5 FT./SEC. |
| 35° | MODERATE, 5 TO 7 FT./SEC. |

PLAN VIEW OF SILT CURTAIN - MOVING WATER

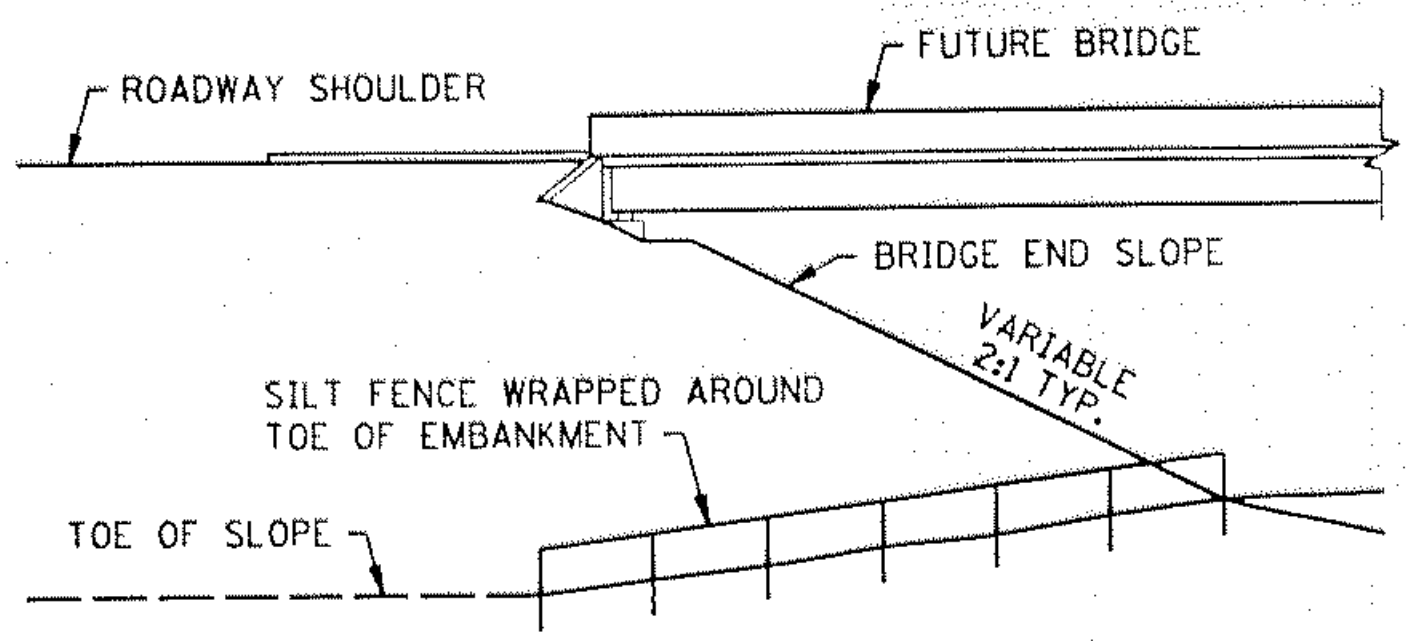


PLAN VIEW OF SILT CURTAIN - STILL WATER

① CURTAIN 1 FT. FROM BOTTOM

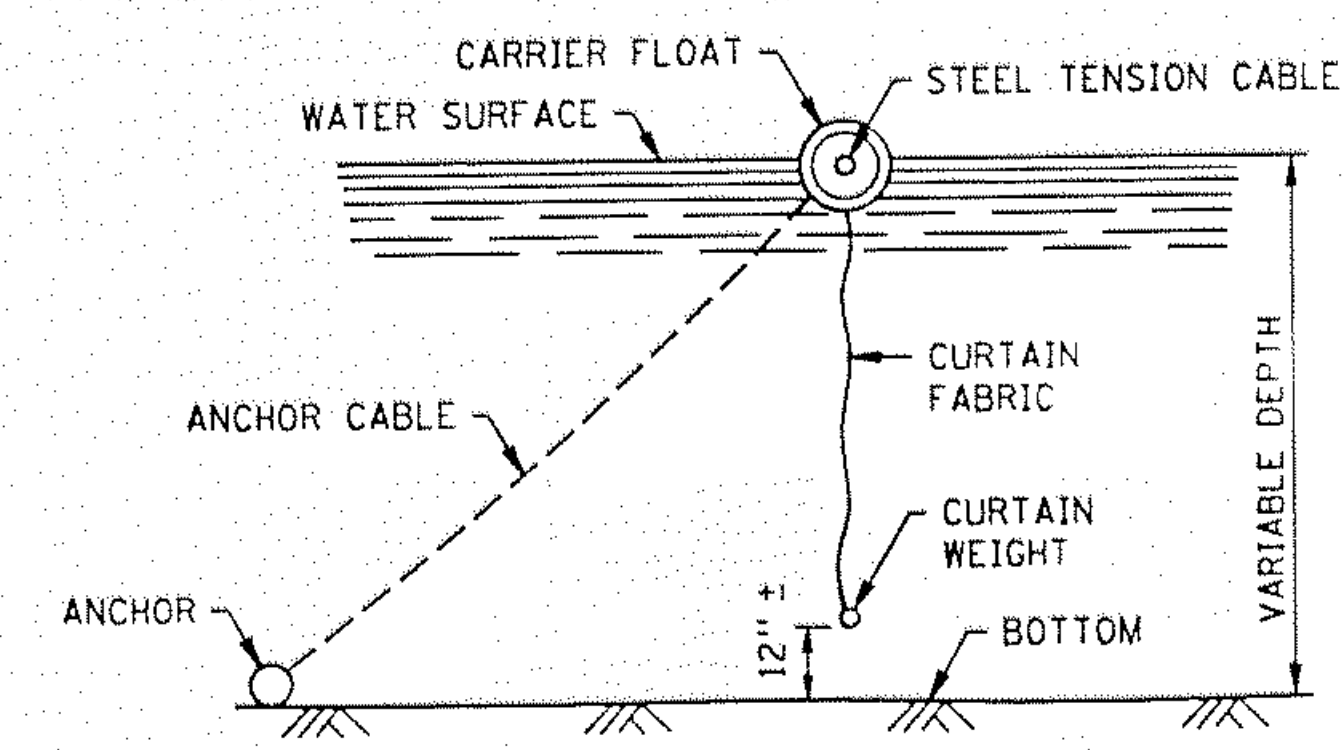


ROADWAY EMBANKMENT

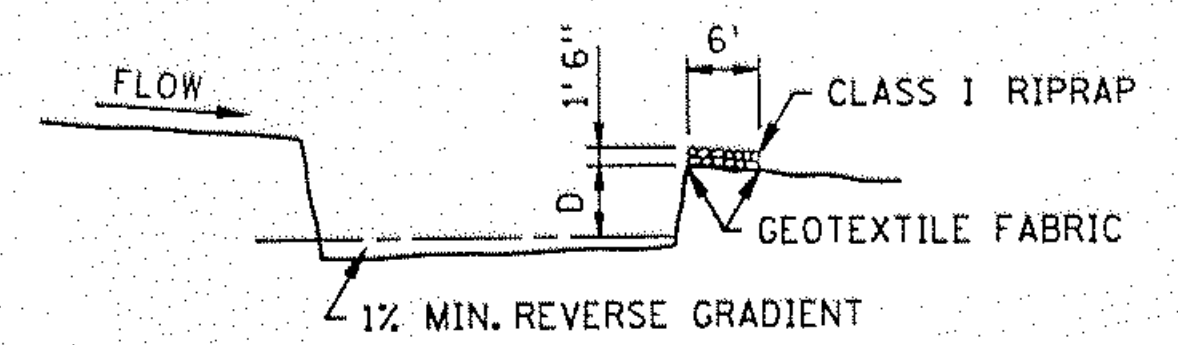
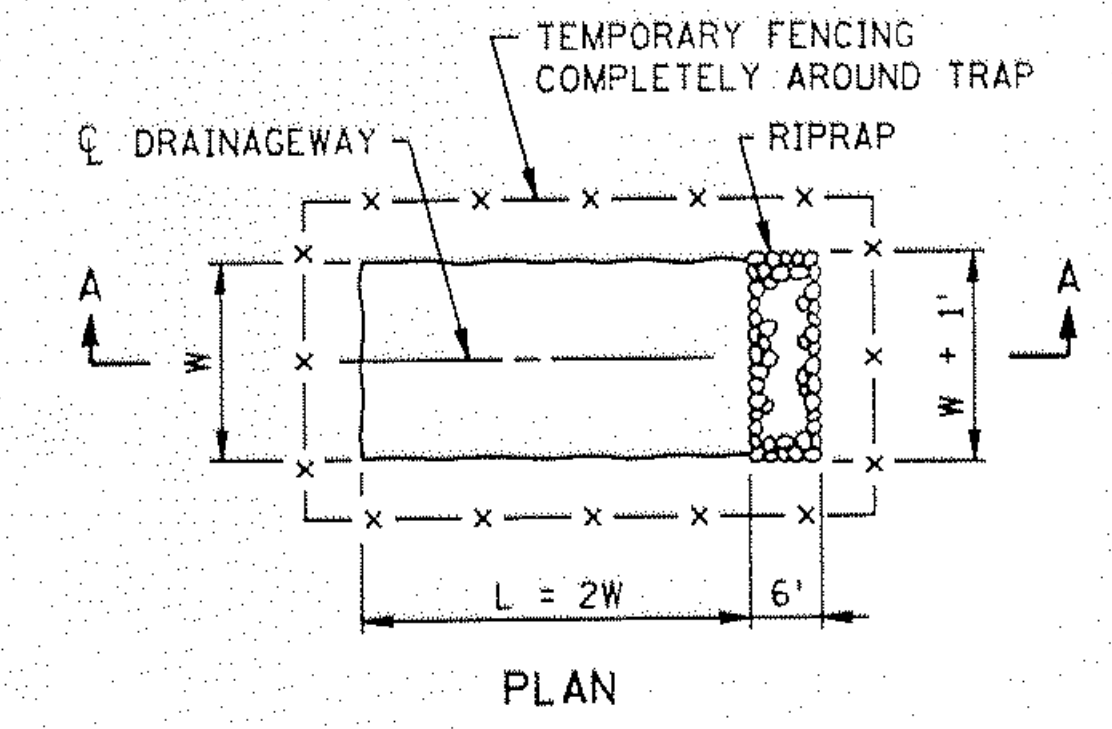


BRIDGE ABUTMENT

SILT FENCE OR BALE CHECK TO PROTECT ADJACENT CRITICAL AREAS

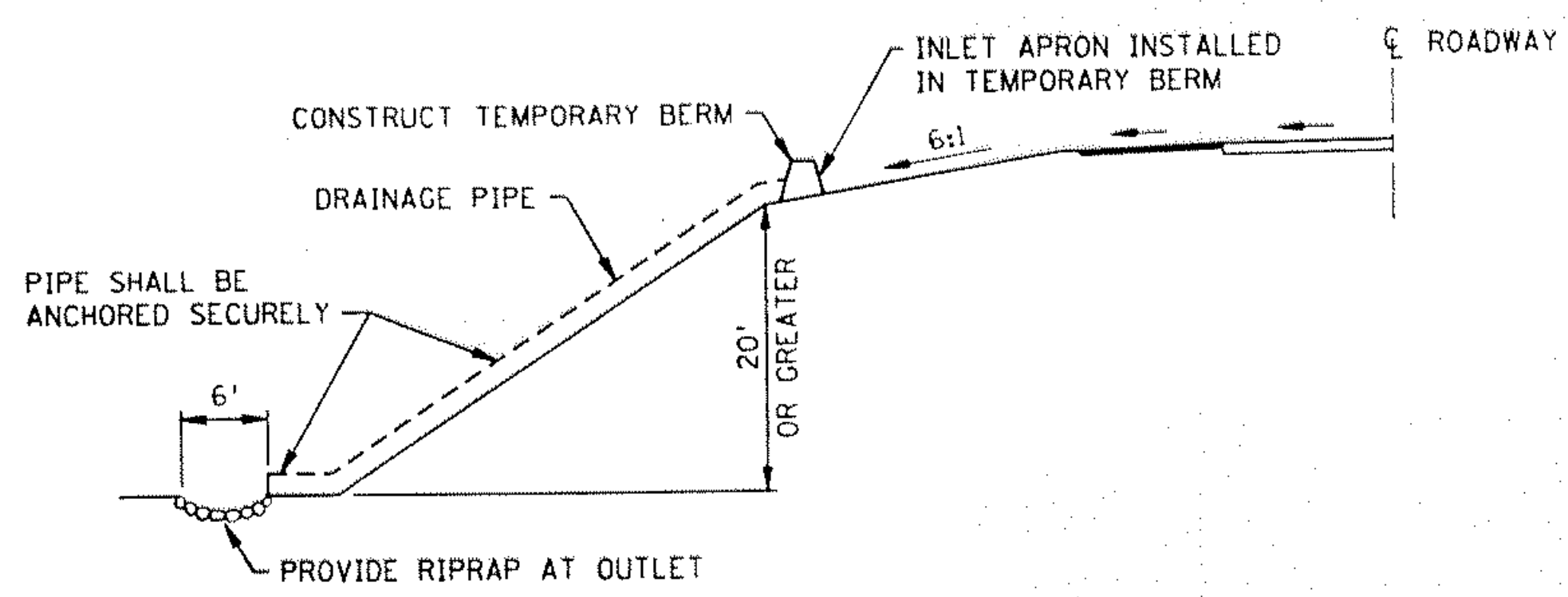


FLOTATION SILT CURTAIN

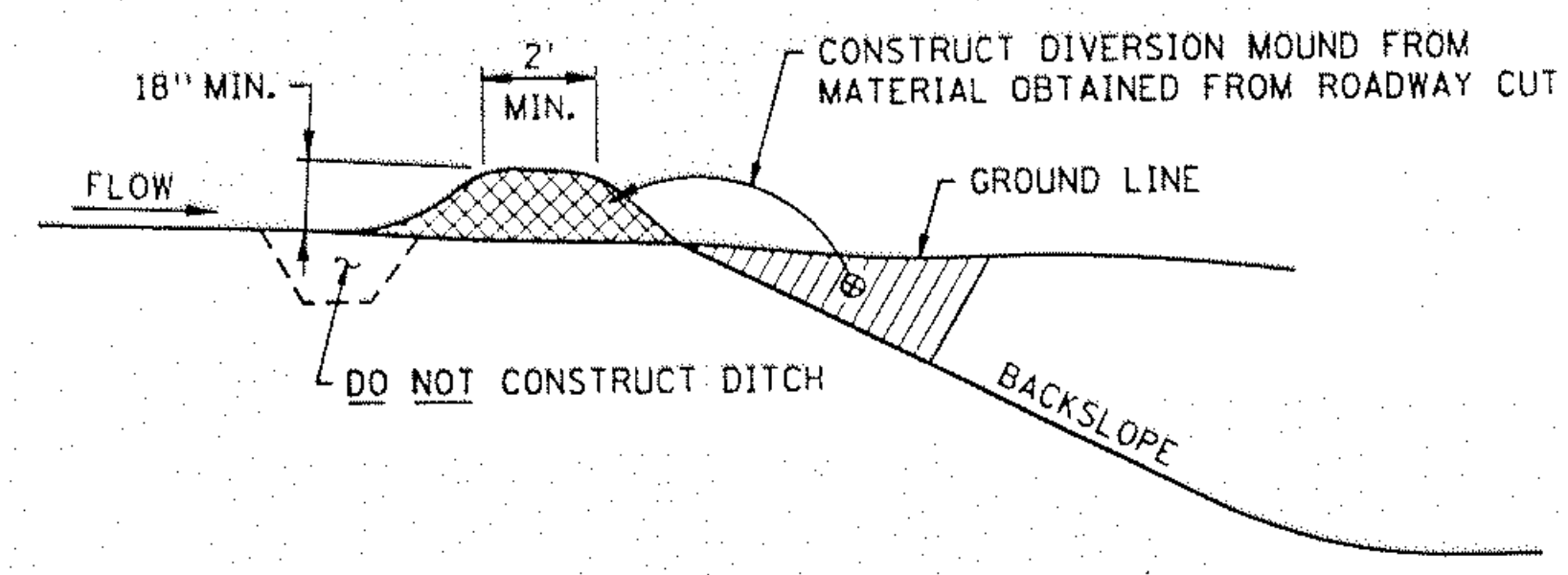


NOTE:
D = 3' MIN., 6' MAX.
W = 10' MIN., 20' MAX.

SECTION A-A
TEMPORARY SEDIMENT TRAP



TEMPORARY DRAIN ON FILL SLOPE

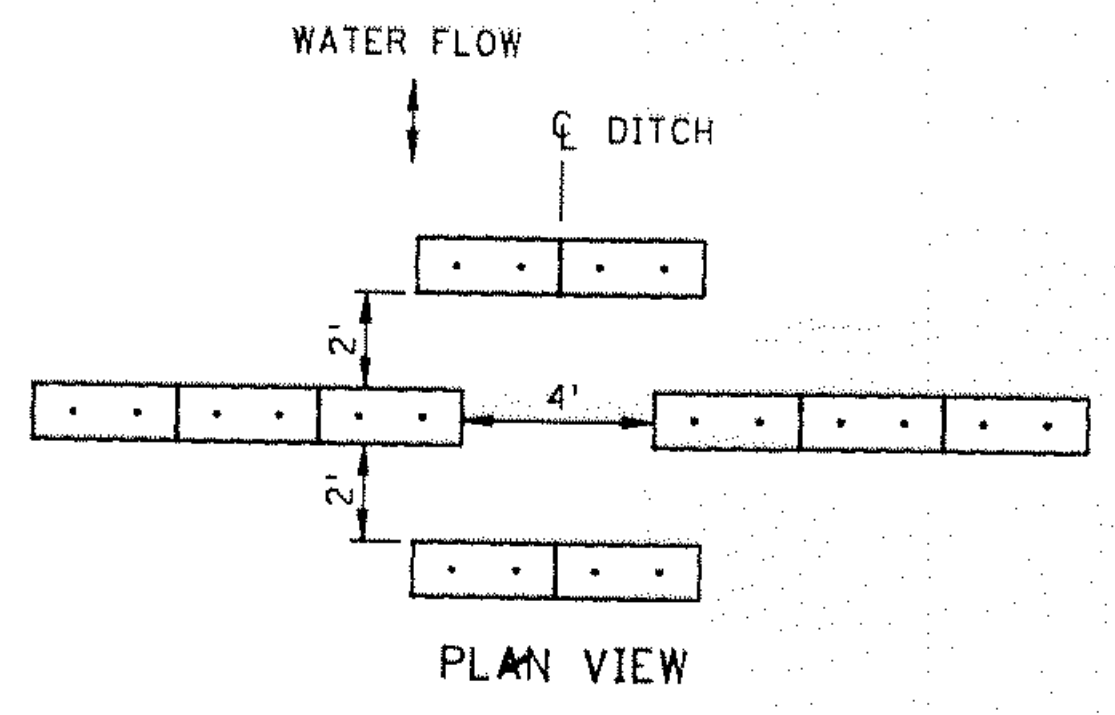


DIVERSION MOUND

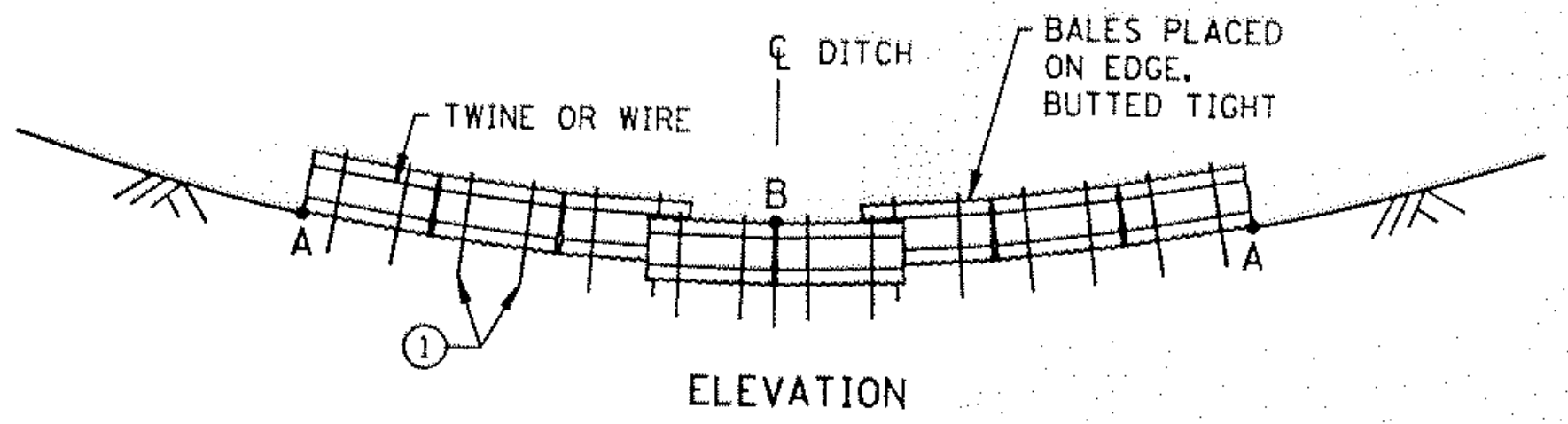
| | |
|--|-------------------------------------|
| STANDARD SHEET NO. 5-297.405 (1 OF 2) | TITLE: TEMPORARY EROSION CONTROL |
| STANDARD APPROVED: AUGUST 2, 1993 | |
| STATE PROJ. NO. 02-601-35 | SHEET NO. 10 OF 85 SHEETS |

SERVER C464511/USP/STANDARDS FILE NAME S4051H93.SPN

SERVER: CA6451\USR\STANDARDS FILE NAME: S4052493.SPN

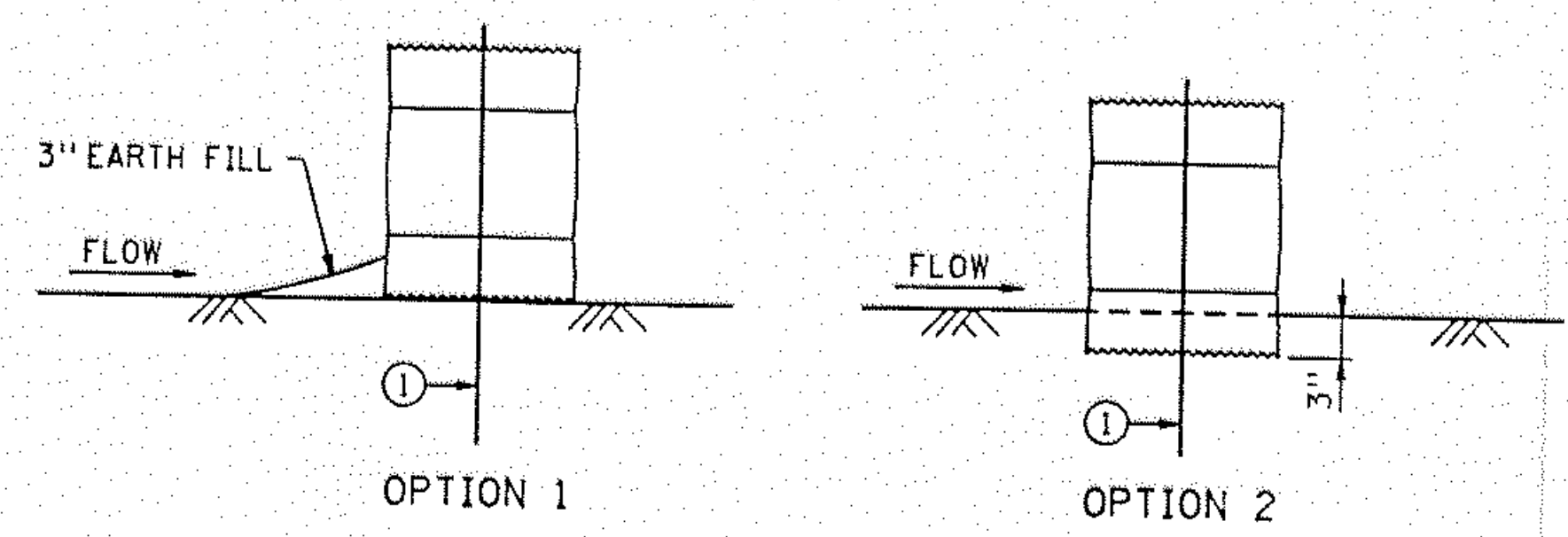


PLAN VIEW

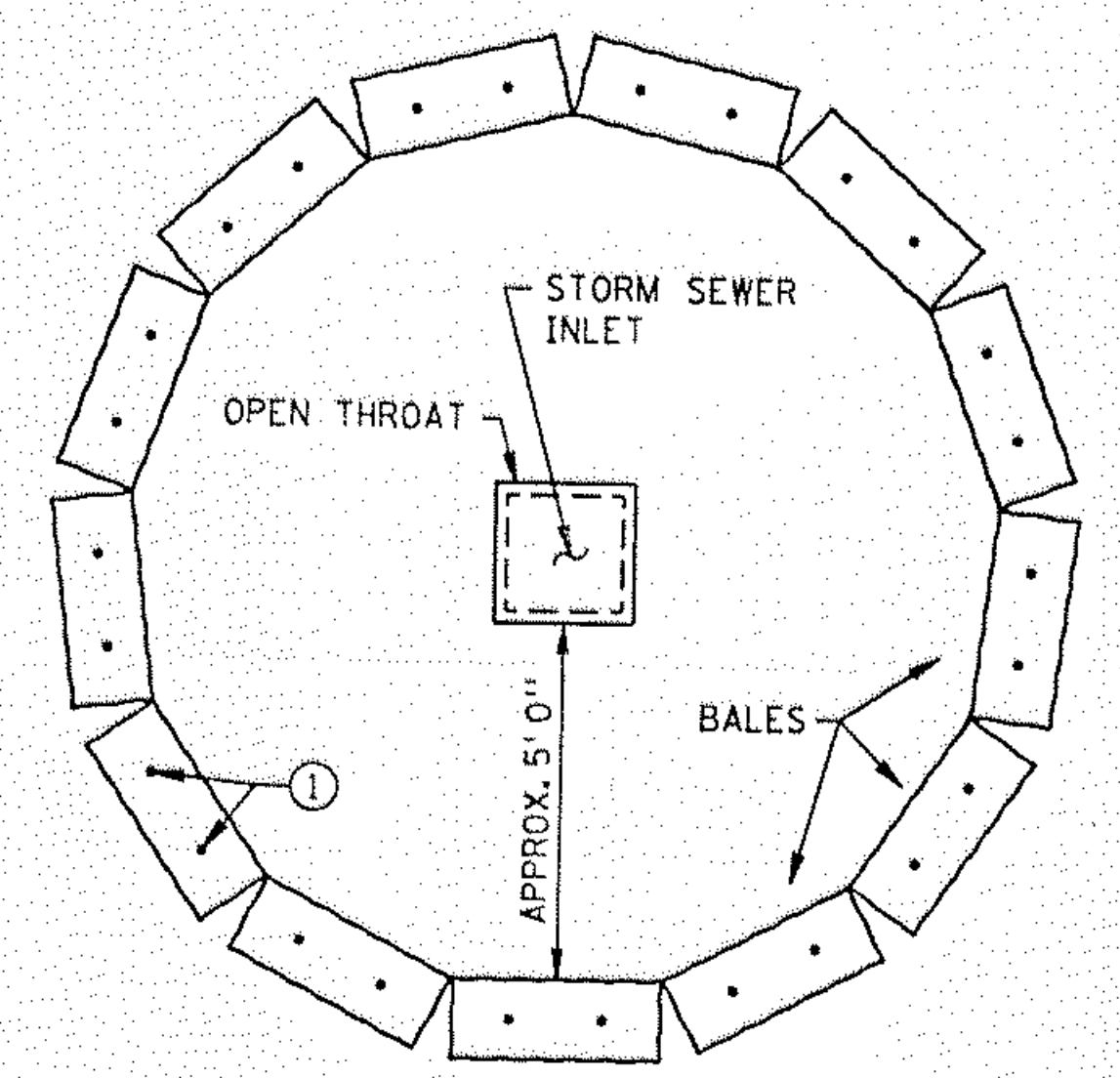


ELEVATION

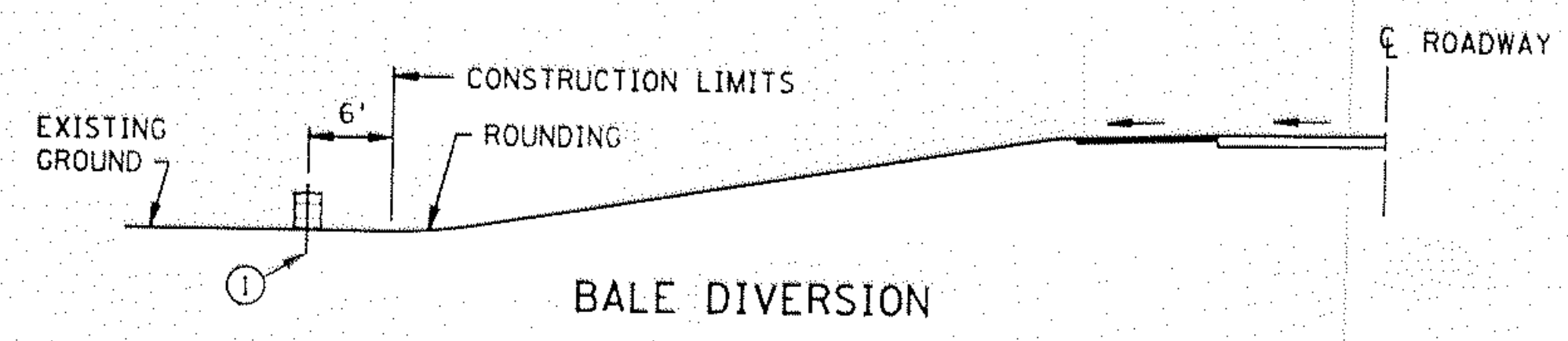
NOTE:
POINT A MUST BE HIGHER THAN POINT B
BALE DITCH VELOCITY CHECKS
(WILL REQUIRE A MINIMUM OF 10 BALES PER SITE)



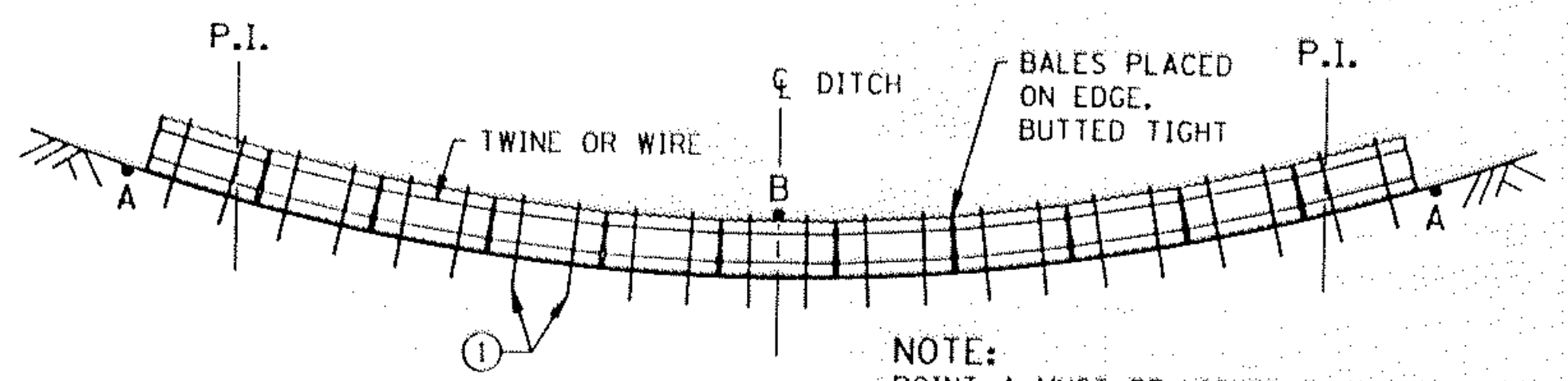
BALE CHECK DETAILS



BALE CHECK TO PROTECT STORM SEWER INLETS



BALE DIVERSION

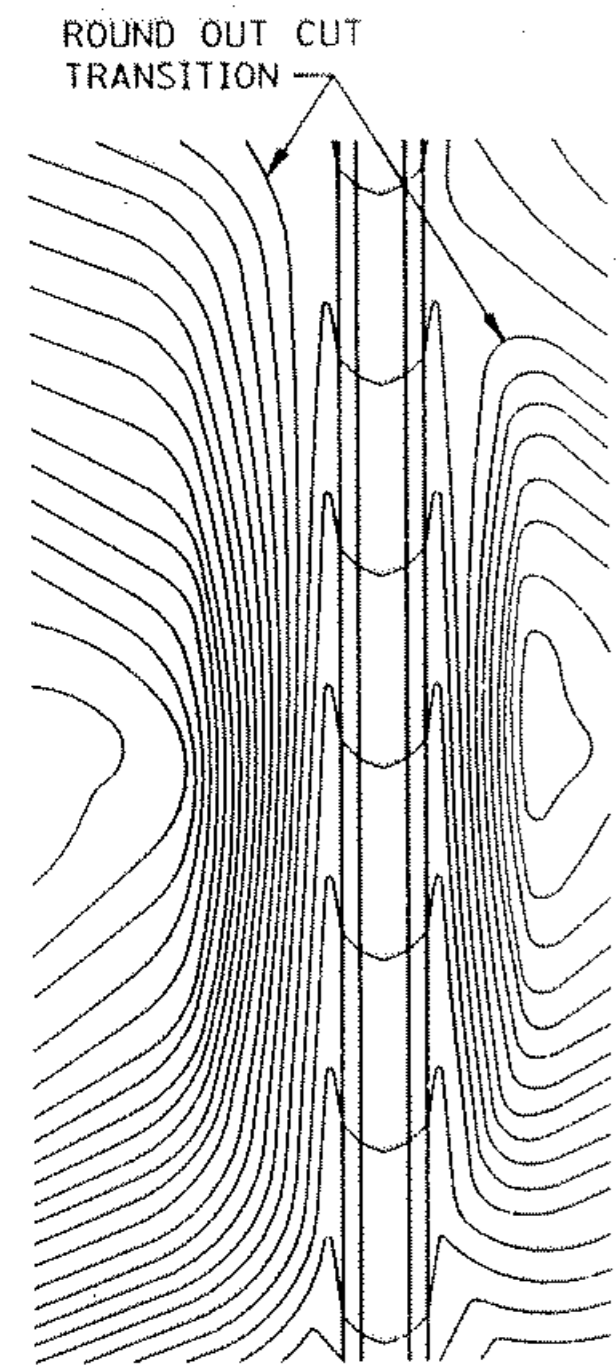


NOTE:
POINT A MUST BE HIGHER THAN POINT B
BALE DITCH SEDIMENT CHECK

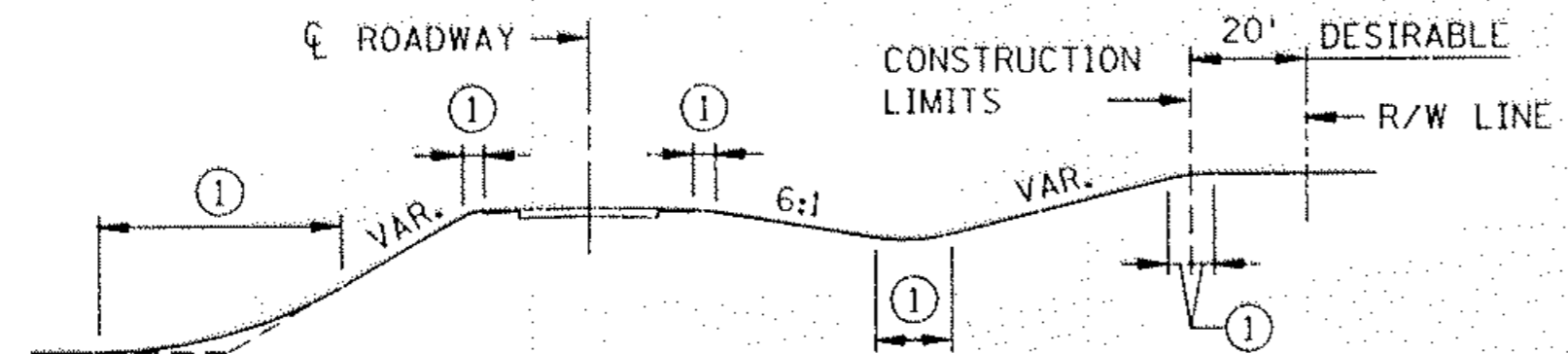
| RECOMMENDED SPACING BETWEEN BALE DITCH CHECKS | |
|---|---------------|
| DITCH GRADE (%) | SPACING (FT.) |
| 2 | 100 |
| 4 | 75 |
| 6 | 50 |
| 8 | 40 |
| 10 | 25 |

NOTE:
① TWO 2" X 2" WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10" MINIMUM.

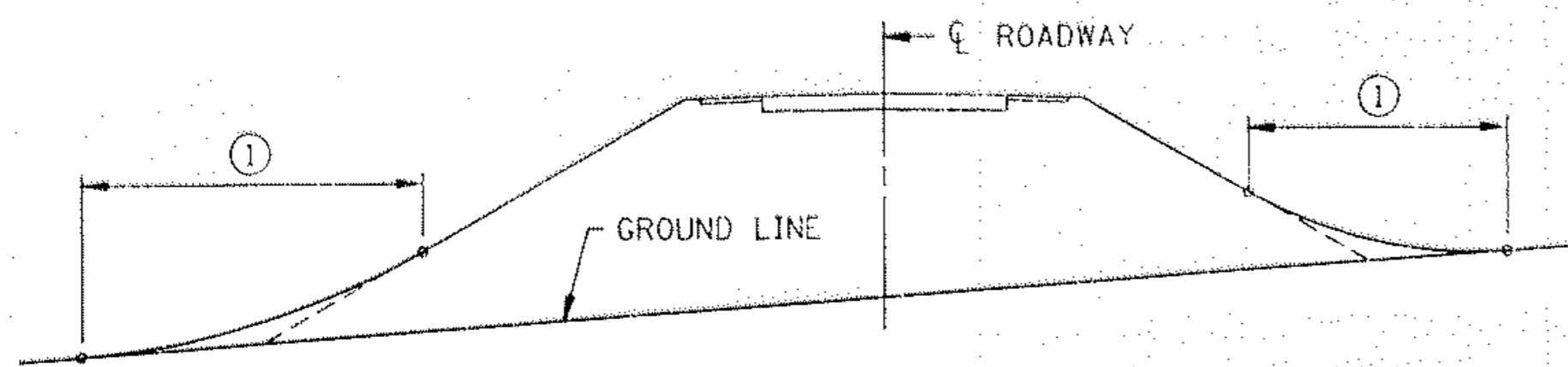
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| STANDARD SHEET NO. 5-297.405 (2 OF 2) | TITLE: TEMPORARY EROSION CONTROL |
| STANDARD APPROVED: AUGUST 2, 1993 | |
| STATE PROJ. NO. _____ 02-601-35 _____ | SHEET NO. 11 OF 85 SHEETS |



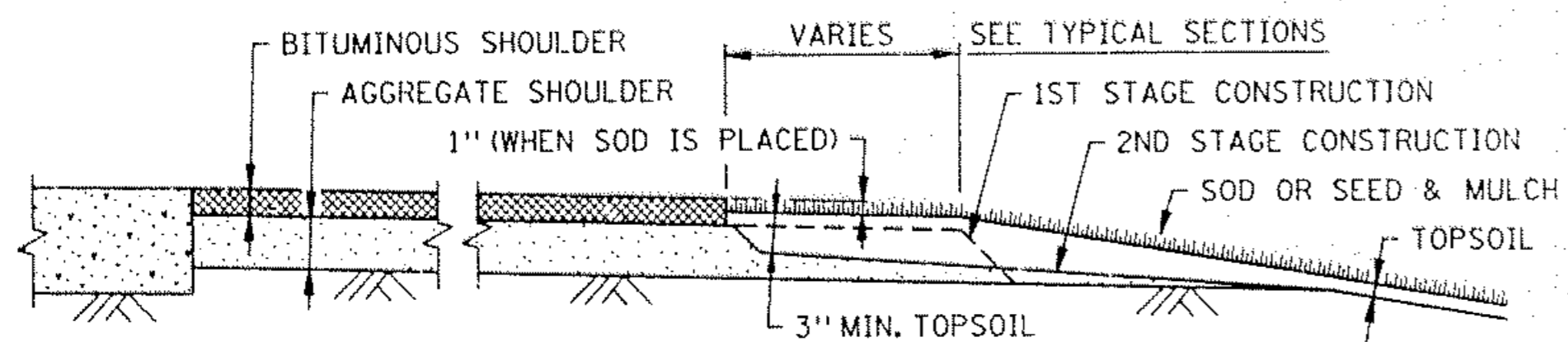
CONTOURING ROAD CUTS



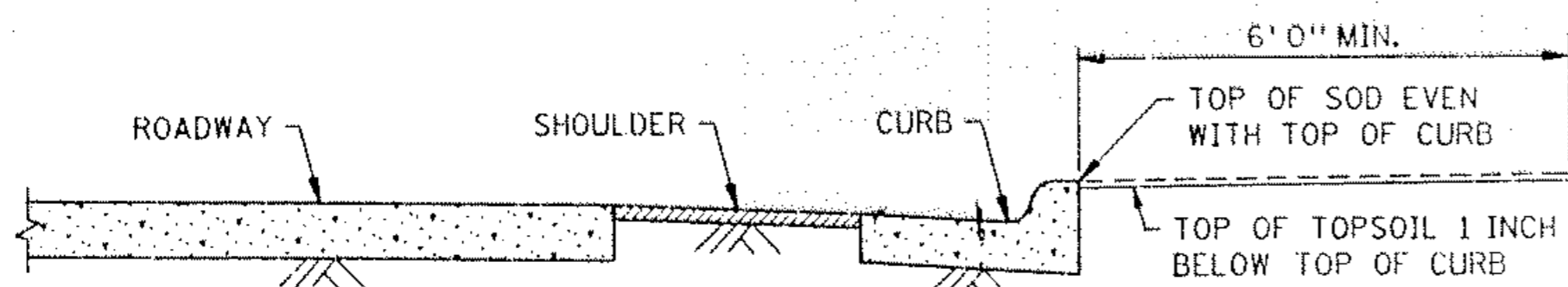
ROUNDING SHOULDERS AND BACKSLOPES



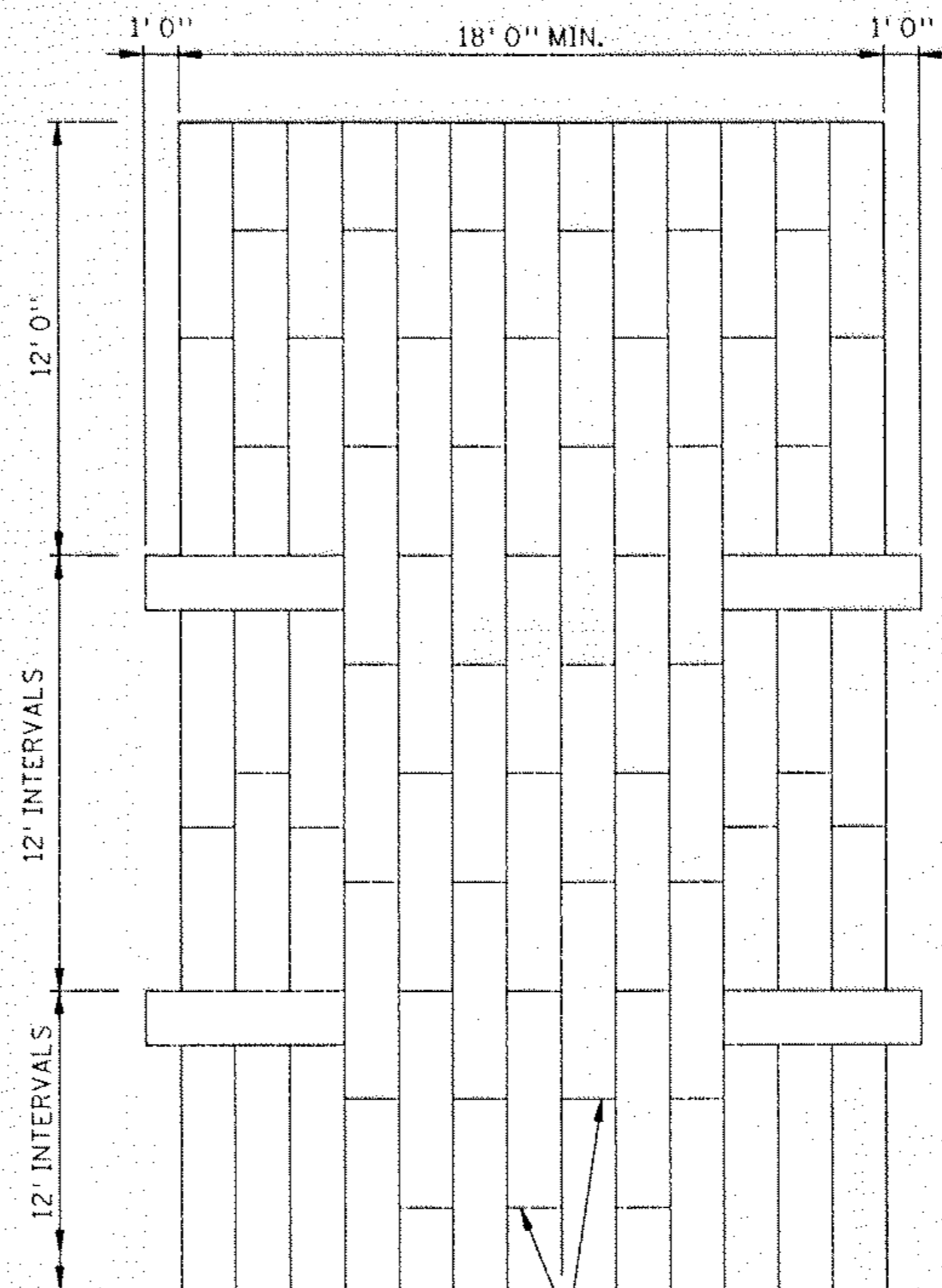
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



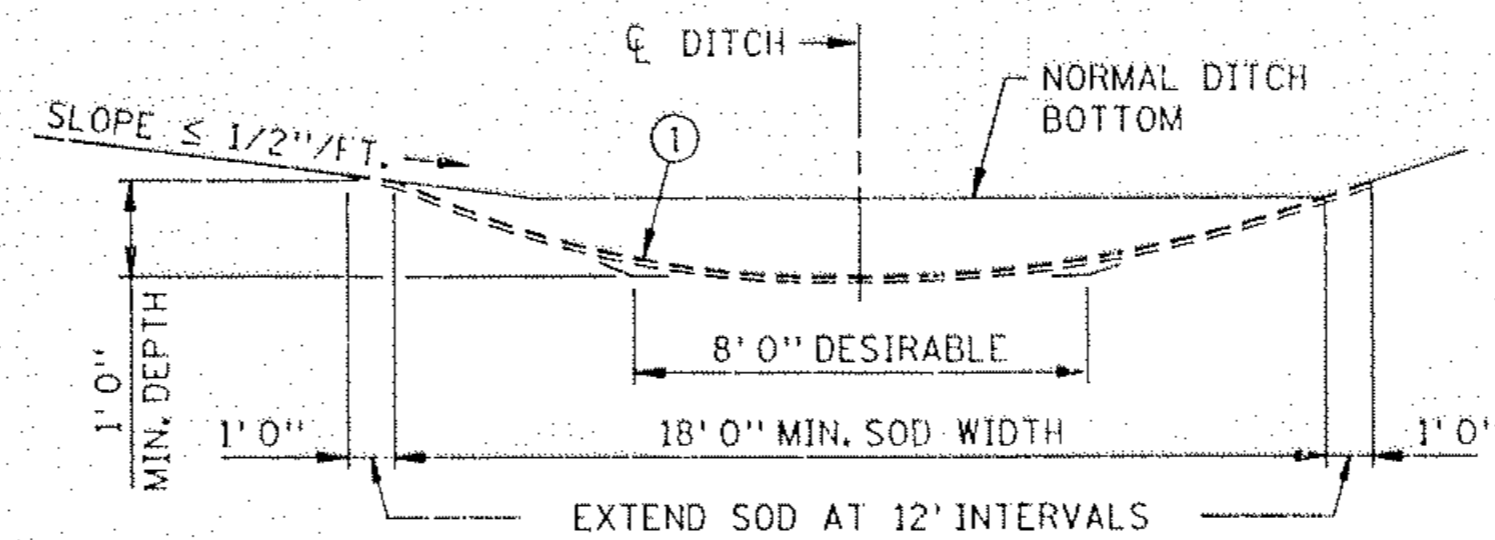
SHAPING AND TOPSOILING INSLOPES



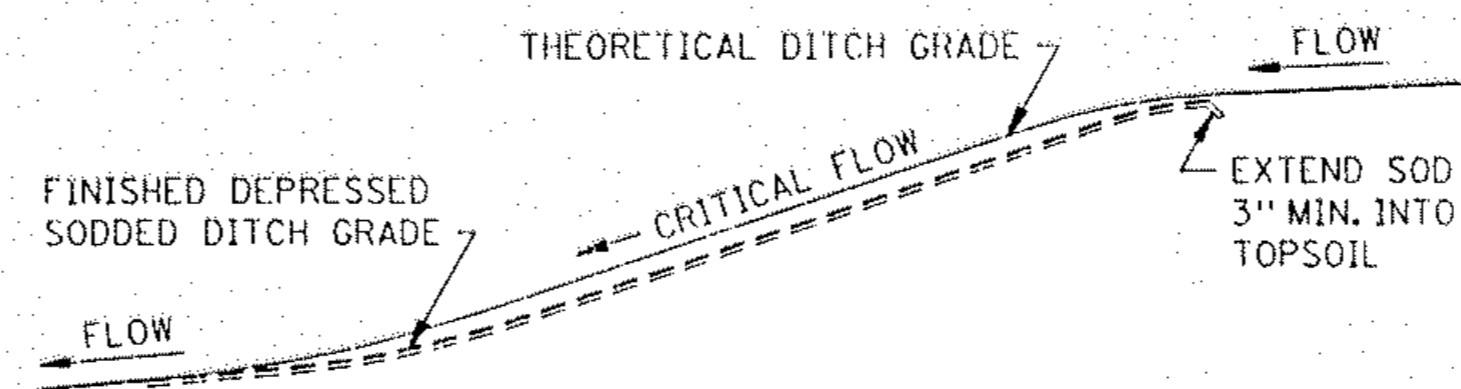
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



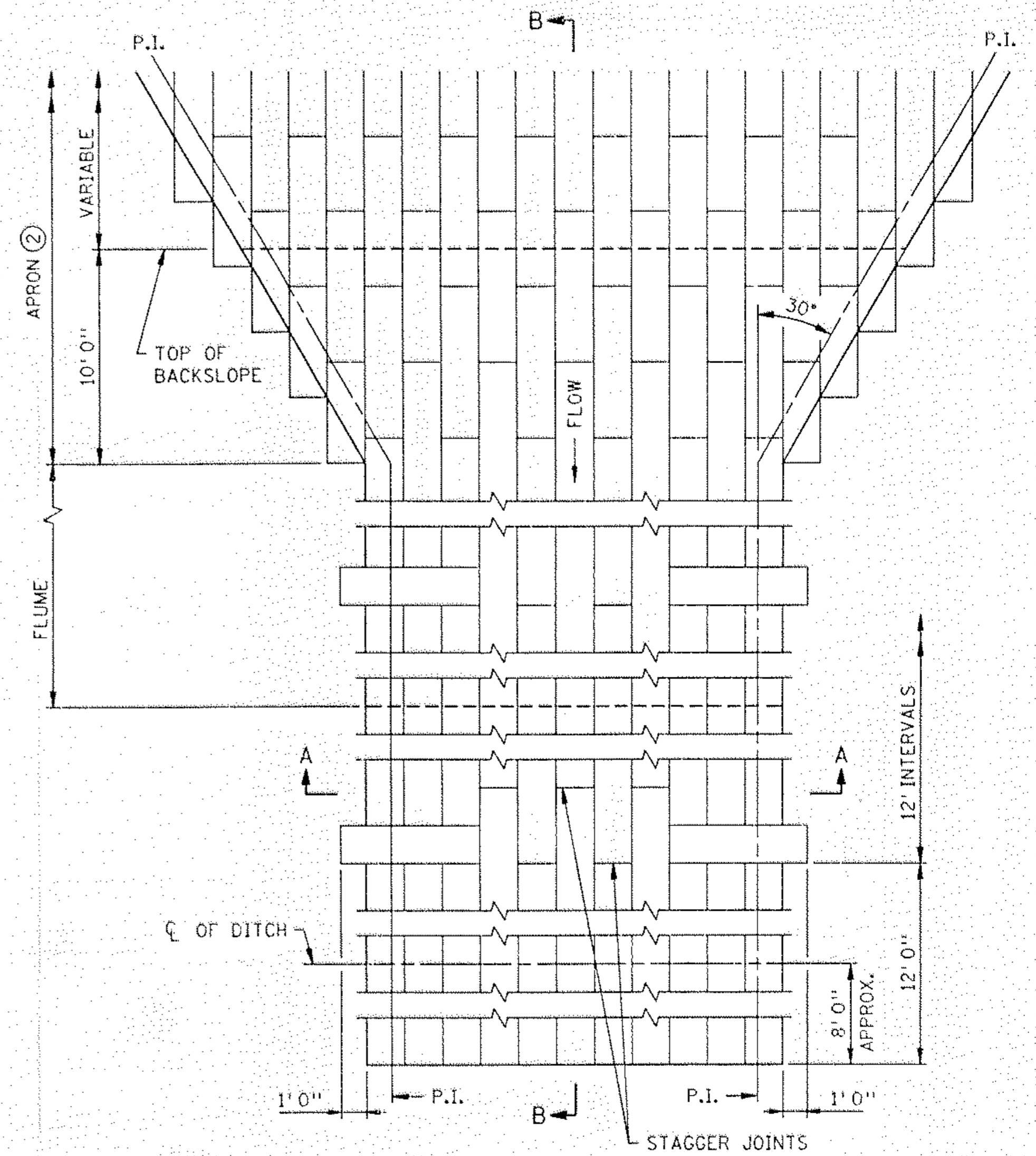
STAGGER JOINTS
PLAN VIEW



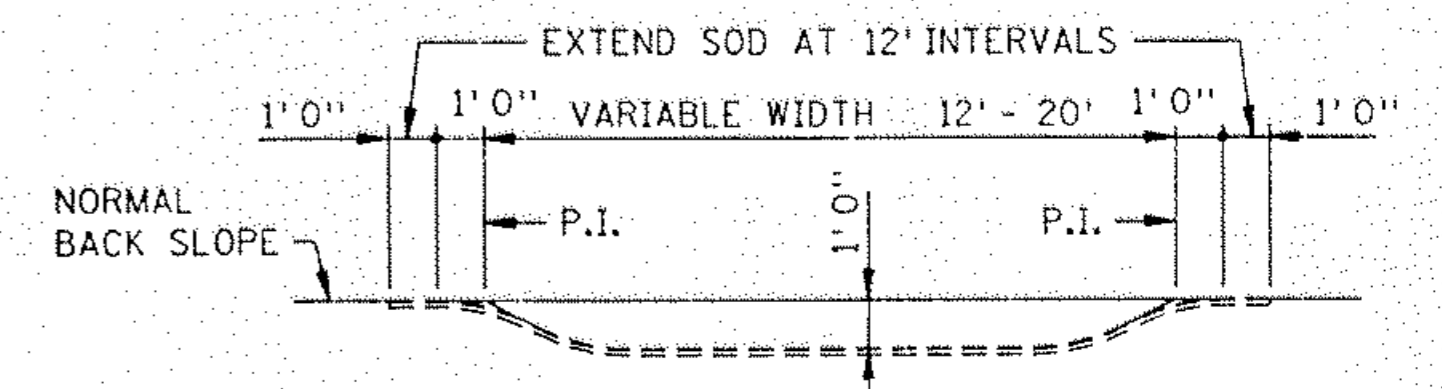
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



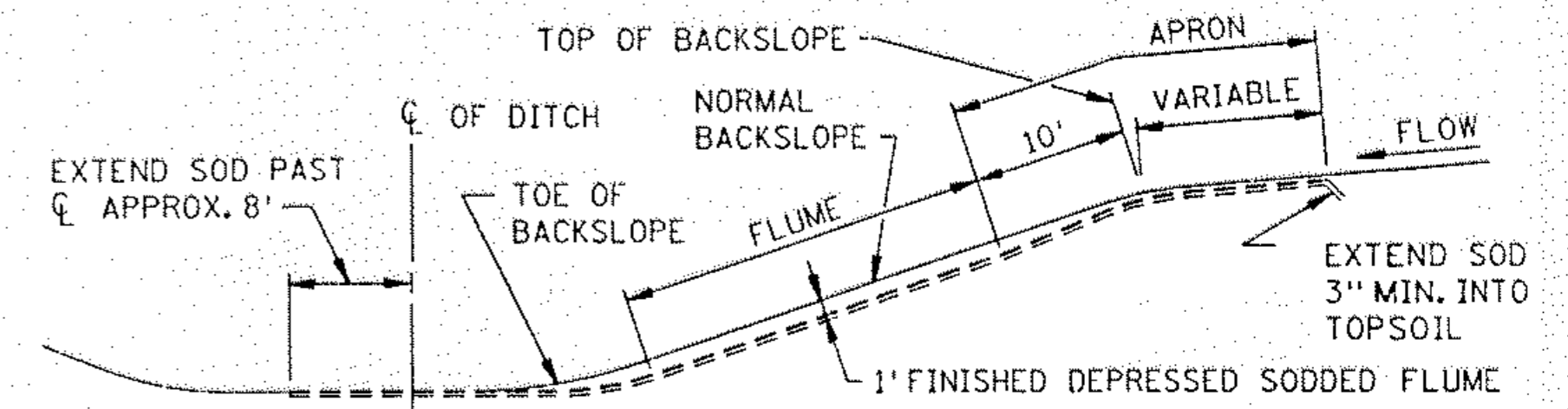
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B

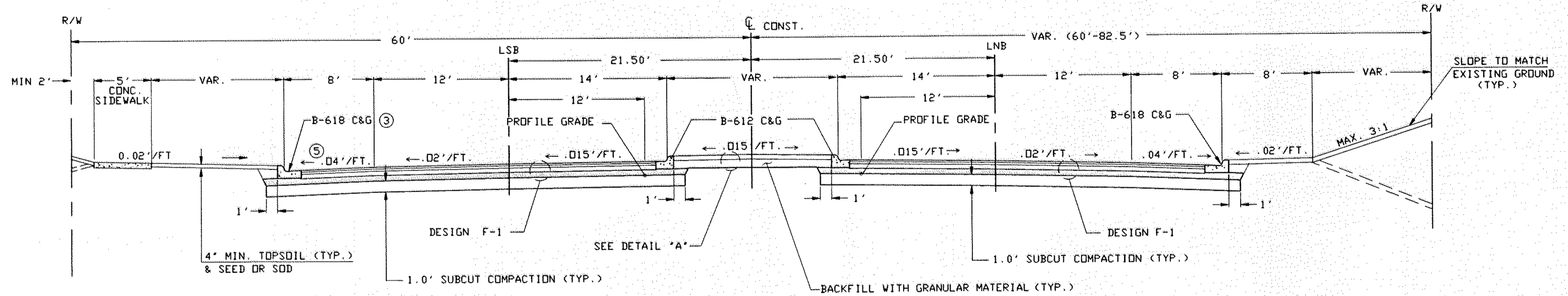
SODDED FLUME DETAILS

- NOTES:
 SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
 ① FOR ROUNDING, SEE ROAD DESIGN MANUAL.
 ② CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

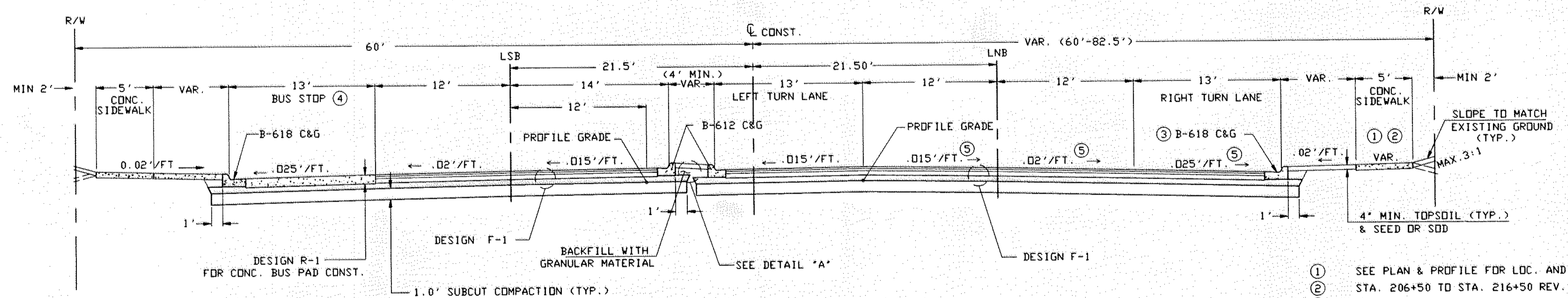
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|---|---|
| STANDARD SHEET NO. 5-297.404 | TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES |
| STANDARD APPROVED: DECEMBER 19, 1990 | |
| STATE PROJ. NO. 02-601-35 | SHEET NO. 12 OF 85 SHEETS |

EAST RIVER ROAD (CSAH 1)-MAINLINE

(LNB STA. 169+75 TO STA. 236+39)



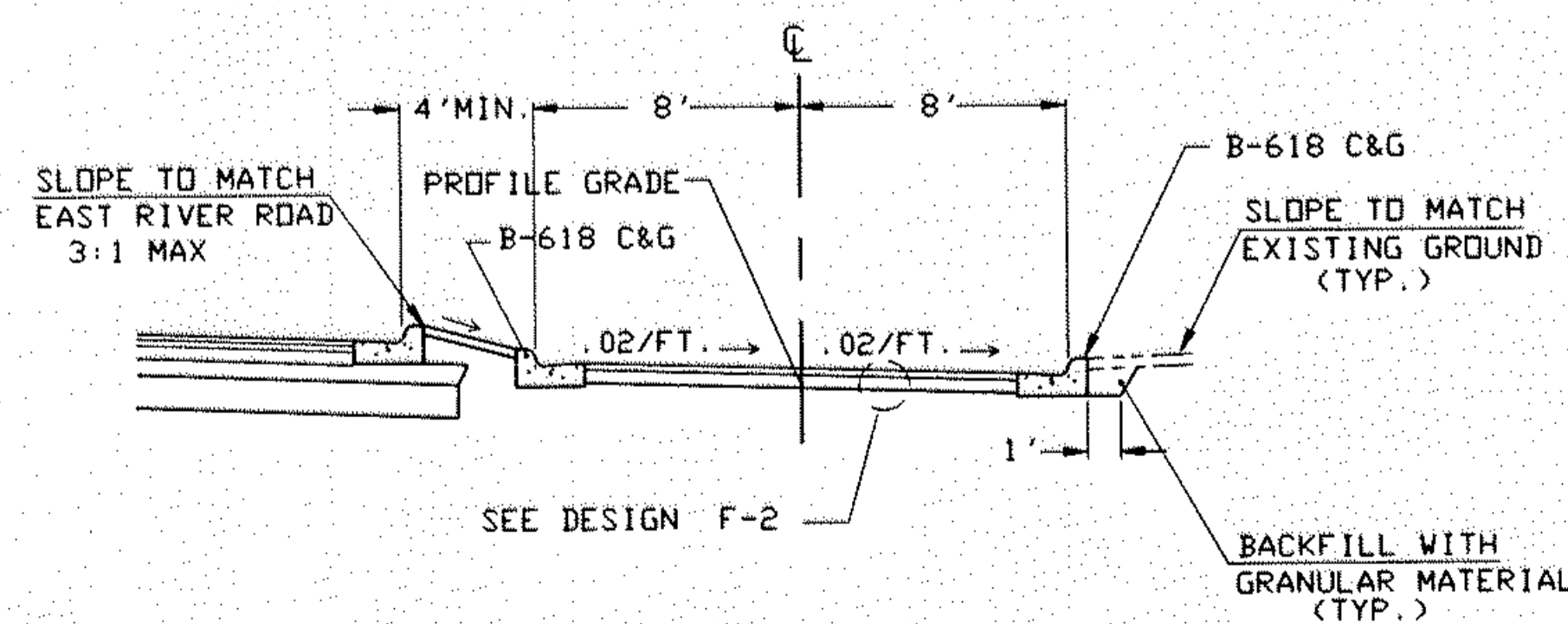
EAST RIVER ROAD (CSAH 1)-TURNBAYS OR BUS STOP



- ① SEE PLAN & PROFILE FOR LOC. AND GRADES.
- ② STA. 206+50 TO STA. 216+50 REV. SLOPE 2%.
- ③ LSB STA. 213+42 TO STA. 215+33, & LNB STA. 213+46 TO STA. 215+24 C.&G. B418.
- ④ SEE CHART C-C ON SHEET 14 FOR LOCATIONS.
- ⑤ MODIFIED SLOPE STA. 179+25 TO 183+00
LNB 0.015' TO 0.020'
LNB 0.020' TO 0.030'
LNB 0.025' TO 0.035'
LSB 0.040' SHLD. TO 0.025'

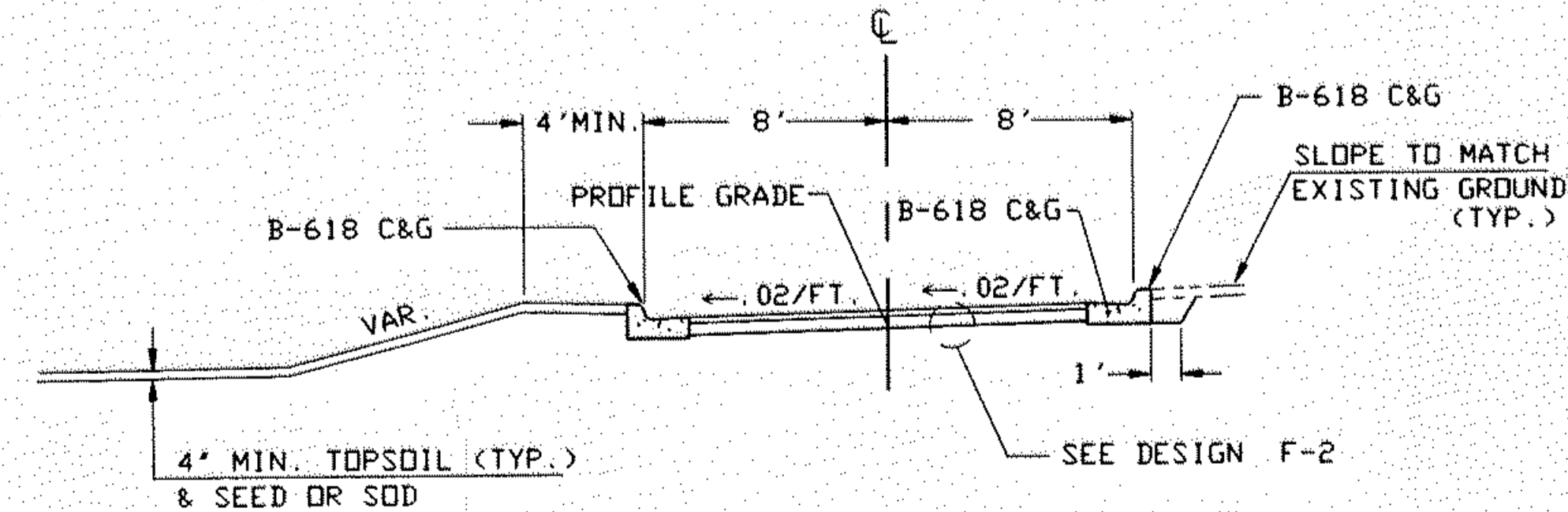
SERVICE ROAD CONSTRUCTION

SERV. ROAD C/L STA. 0+15 TO STA. 13+35



SERVICE ROAD CONSTRUCTION

SERV. ROAD C/L STA. 13+50 TO STA. 15+21



NOTE: FROM STA. 13+35 TO STA. 13+50 TRANSITION SLOPE.

GENERAL NOTES

- 1. 10' OBSTACLE FREE ZONE REQUIRED FROM EDGE OF TRAVELLED LANE.
- 2. PROFILE GRADE IS SAME AS GRADING GRADE.

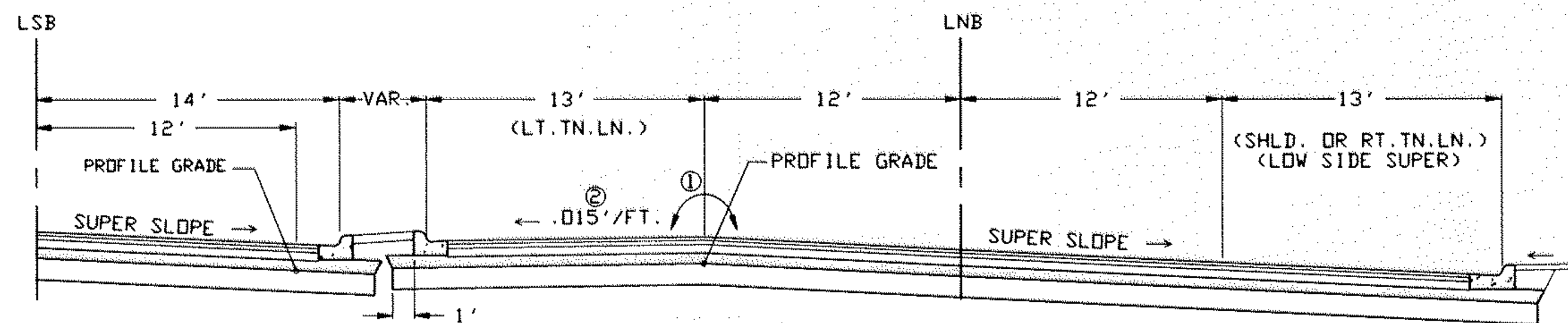
TYPICAL SECTIONS

| REVISIONS | BY | DATE |
|-----------|----|------|
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FILE NAME: P:\0260135\TYP-SEC.DWG MN. (03-09-95)

EAST RIVER ROAD (CSAH 1)

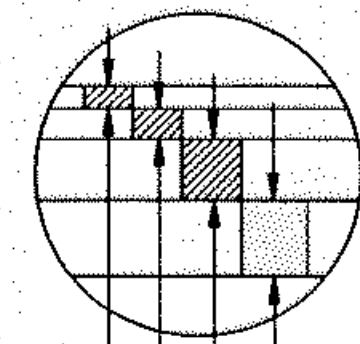
(LT. TN. LN. HIGH SIDE SUPER, RT. TN. LN. LOW SIDE SUPER)



- ① MAX. ROLLOVER NOT TO EXCEED 0.07'/FT.
- ② FLATTEN CROSS-SLOPE TO MAINTAIN 0.07'/FT. MAX. ROLLOVER.

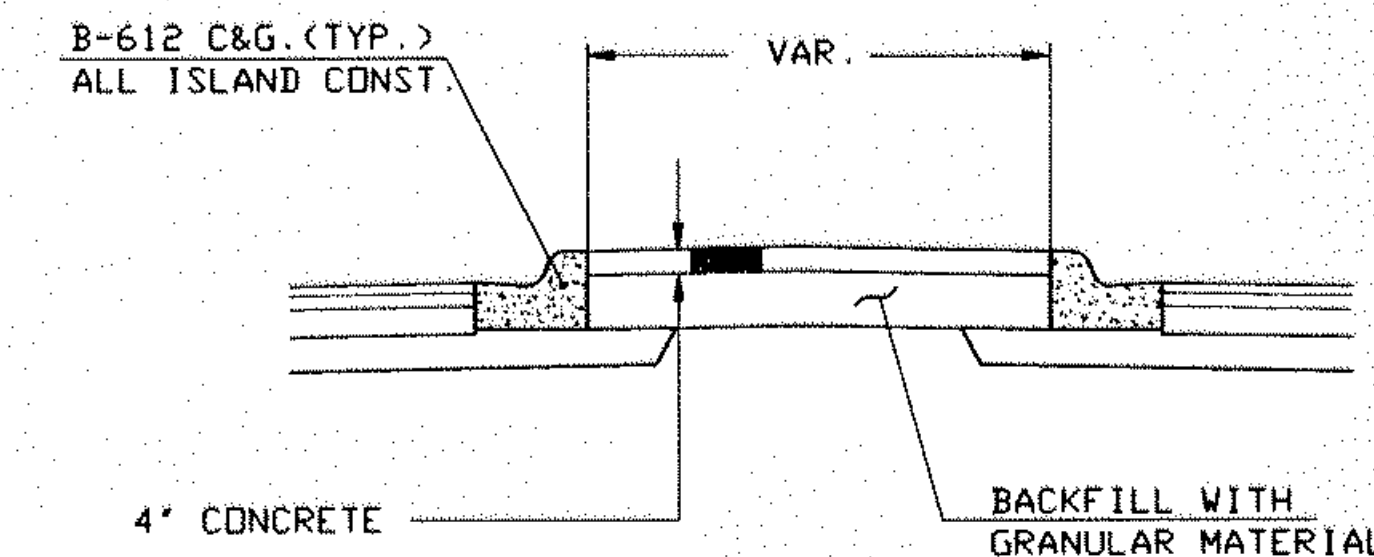
DESIGN F-1

CSAH. 1



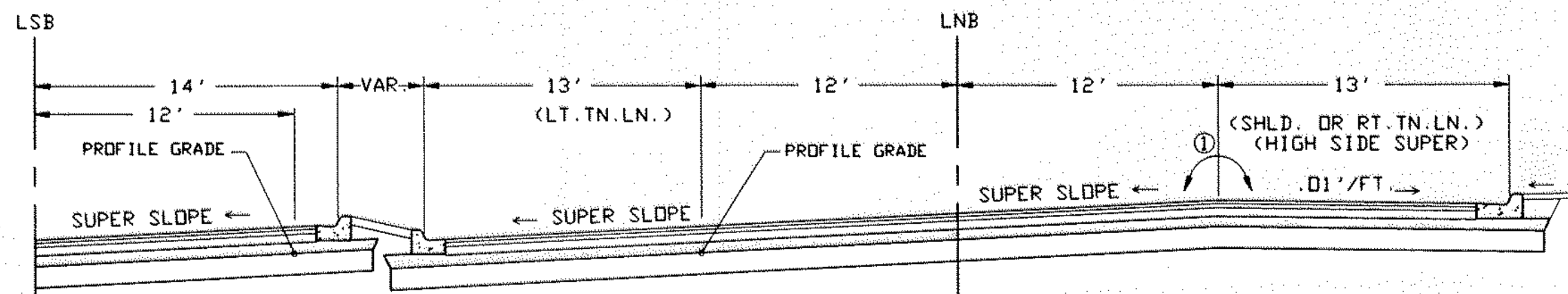
- 1 1/2" TYPE 41 WEAR (41WEA50055Y)
- 2" TYPE 41 DR 42 BINDER (41B1B50055Y)
- 4" TYPE 31 DR 32 BASE (31BBB50000Y)
- 5" AGGREGATE BASE CLASS 5A

DETAIL "A"



EAST RIVER ROAD (CSAH 1)

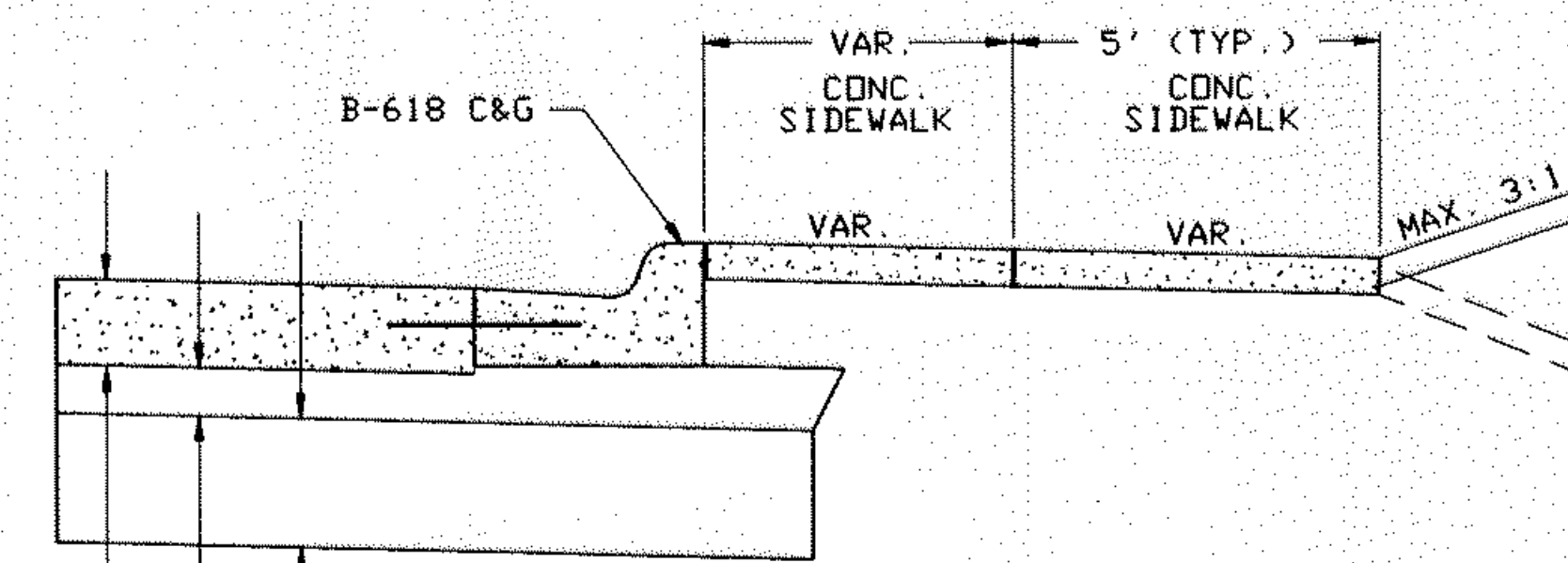
(LT. TN. LN. LOW SIDE SUPER, RT. TN. LN. HIGH SIDE SUPER)



- ① MAX. ROLLOVER NOT TO EXCEED 0.07'/FT.

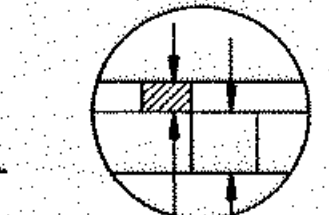
DESIGN R-1

(BUS PAD)



DESIGN F-2

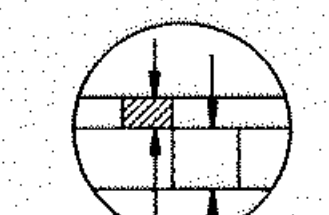
SERVICE ROAD



- 2" TYPE 41 WEAR (41WEA50000Y)
- 4" AGGREGATE BASE CLASS 5A

DESIGN F-3

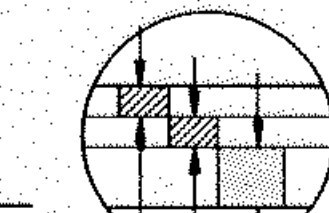
TEMP. CONN. - OVERLAY



- 1-1/2" TYPE 41 DR 42 WEAR (41WEA50055Y)
- INPLACE BIT. PAVEMENT

DESIGN F-4

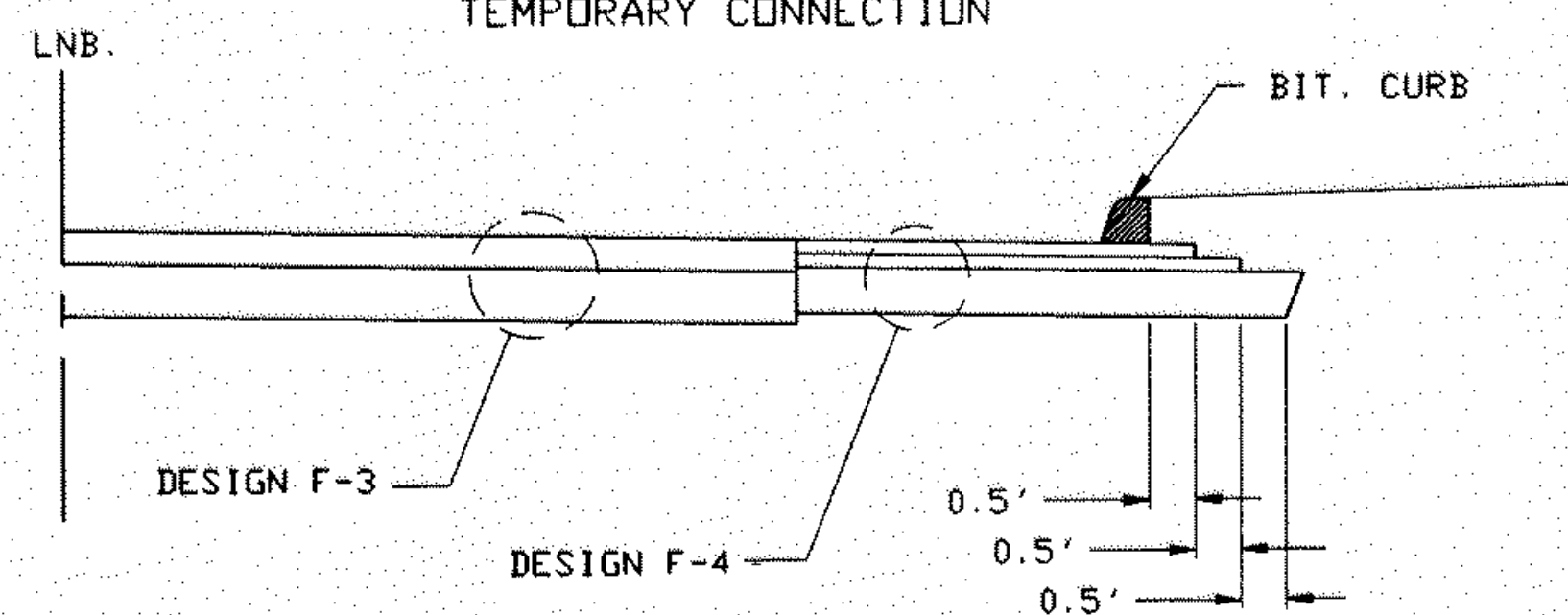
TEMP. CONN. - WIDENING



- 1-1/2" TYPE 41 WEAR (41WEA50055Y)
- 1-1/2" TYPE 31 BASE (31BBB50000Y)
- 5" AGGREGATE BASE CLASS 5A

EAST RIVER ROAD (CSAH 1)

TEMPORARY CONNECTION



- 8' - (60"x11.5') 2301 NONREINFORCED CONC. PVMT.
- PROVIDE C1 TRANSVERSE JOINTS 20' ON CENTER.
- 4.5' 2211 AGGREGATE BASE CLASS 5A
- 1.0' SUBCUT COMPACTION (TYP.)

LT. & RT. TURN LANE OR BUS STOP LOCATION (C-C)

| STA. TO | STA. | LOCATION | DESCRIPTION |
|---------|--------|----------|----------------------------|
| 167+50 | 169+92 | RT. LNB. | RIGHT TURN LANE |
| 170+20 | 172+51 | LT. LSB. | RIGHT TURN LANE & BUS STOP |
| 170+50 | 171+30 | RT. LNB. | BUS STOP |
| 170+55 | 171+55 | LT. LNB. | LEFT TURN LANE |
| 172+81 | 174+17 | LT. LSB. | RIGHT TURN LANE |
| 172+87 | 173+87 | LT. LNB. | LEFT TURN LANE |
| 174+49 | 177+49 | LT. LSB. | RIGHT TURN LANE |
| 181+32 | 184+32 | RT. LNB. | RIGHT TURN LANE |
| 181+68 | 184+25 | LT. LNB. | LEFT TURN LANE |
| 184+65 | 189+07 | RT. LNB. | RIGHT TURN LANE & BUS STOP |
| 184+99 | 189+49 | LT. LSB. | RIGHT TURN LANE |
| 185+05 | 186+16 | LT. LNB. | LEFT TURN LANE |
| 187+81 | 189+10 | LT. LNB. | LEFT TURN LANE |
| 189+88 | 192+67 | LT. LSB. | RIGHT TURN LANE & BUS STOP |
| 192+15 | 198+13 | RT. LNB. | RIGHT TURN LANE & BUS STOP |
| 192+99 | 198+37 | LT. LSB. | RIGHT TURN LANE & BUS STOP |
| 190+22 | 193+15 | RT. LSB. | LEFT TURN LANE |
| 195+25 | 197+96 | LT. LNB. | LEFT TURN LANE |
| 198+64 | 201+32 | LT. LSB. | RIGHT TURN LANE |
| 198+98 | 201+74 | RT. LSB. | LEFT TURN LANE |
| 201+71 | 207+22 | LT. LSB. | RIGHT TURN LANE & BUS STOP |
| 204+01 | 206+79 | LT. LNB. | LEFT TURN LANE |
| 207+58 | 210+59 | LT. LSB. | RIGHT TURN LANE |
| 213+35 | 215+35 | RT. LNB. | RIGHT TURN LANE |
| 212+53 | 215+03 | LT. LNB. | LEFT TURN LANE |
| 216+03 | 218+93 | LT. LSB. | RIGHT TURN LANE |
| 216+07 | 218+57 | RT. LSB. | LEFT TURN LANE |
| 221+30 | 223+70 | RT. LNB. | RIGHT TURN LANE |
| 223+45 | 224+55 | LT. LSB. | BUS STOP |
| 225+07 | 227+57 | RT. LSB. | LEFT TURN LANE |
| 224+81 | 231+11 | LT. LSB. | RIGHT TURN LANE & BUS STOP |
| 231+25 | 231+85 | RT. LNB. | BUS STOP |
| 235+45 | 236+05 | RT. LNB. | BUS STOP |

TYPICAL SECTIONS

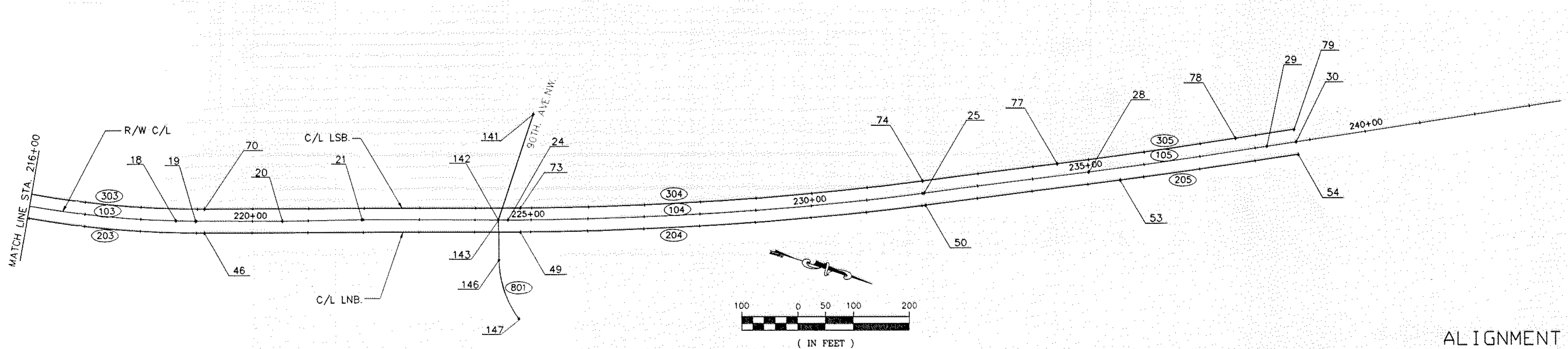
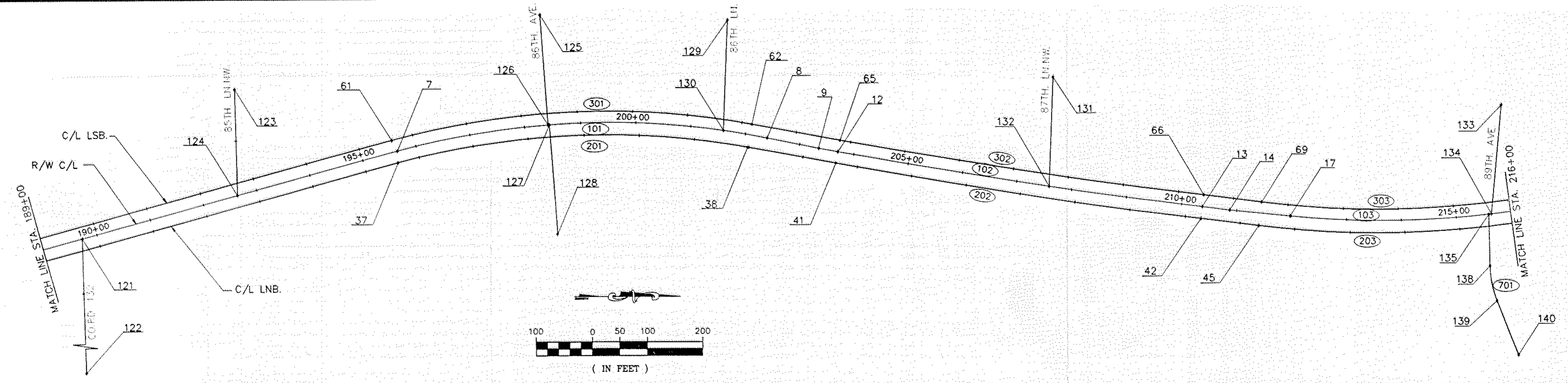
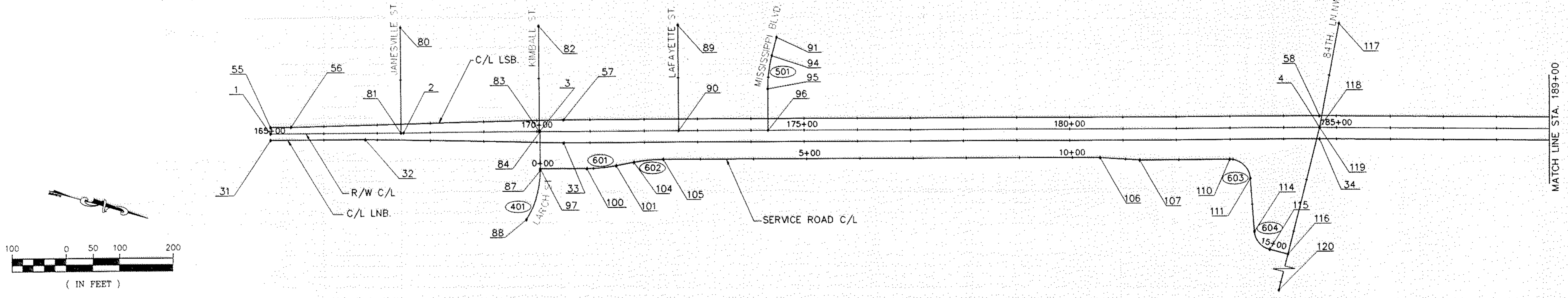
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CERTIFIED BY Douglas M. ...

P.E. REG NO. 20235 3/22 19 95

S.P. 02-601-35 S.A.P. 114-020-06 C.P. 127-020-15

Sheet No. 14 of 85 Sheets



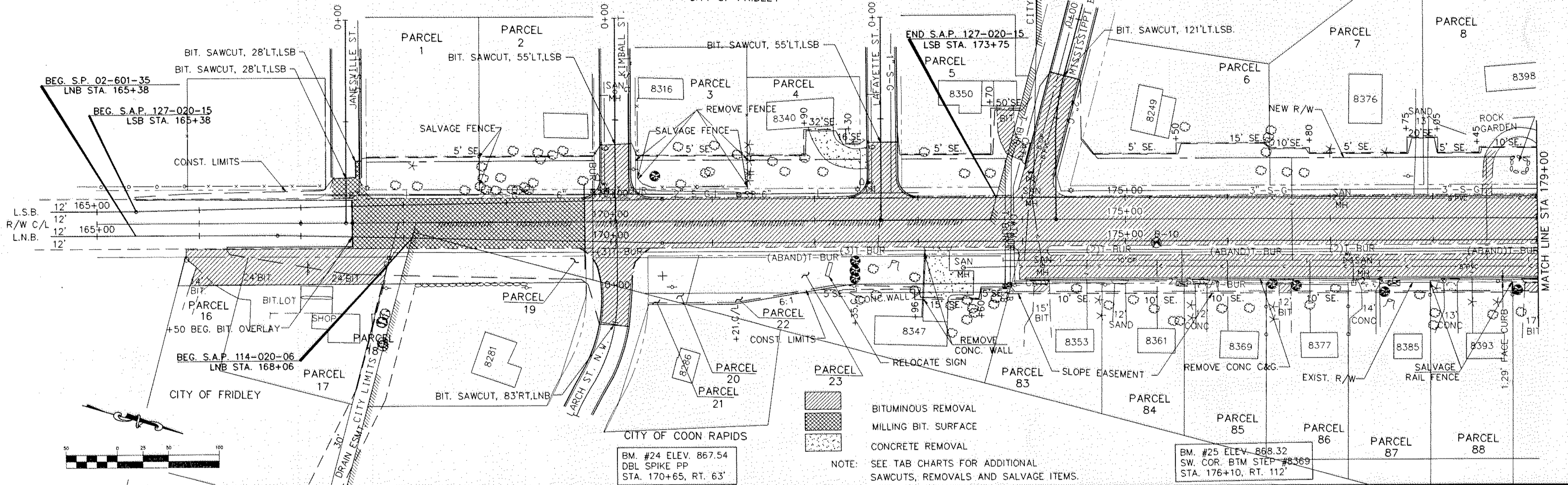
ALIGNMENT PLAN

| REVISIONS | DATE | BY |
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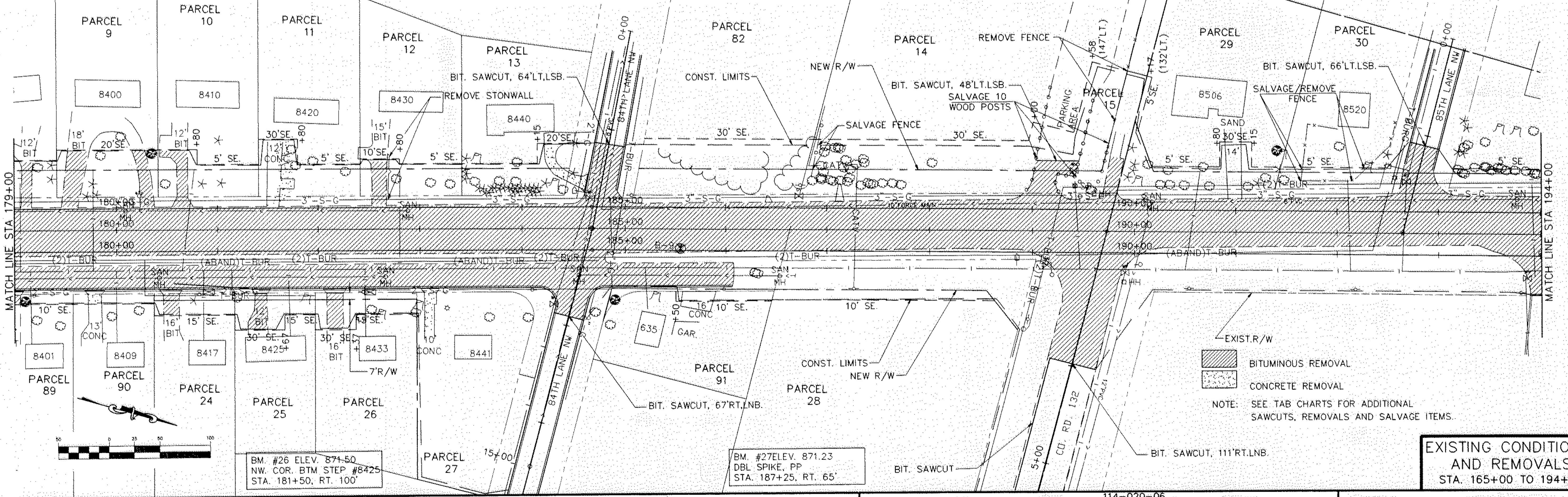
CITY OF FRIDLEY

CITY OF COON RAPIDS



BM. #24 ELEV. 867.54
 DBL SPIKE PP
 STA. 170+65, RT. 63'

BM. #25 ELEV. 868.32
 SW. COR. BTM STEP #8369
 STA. 176+10, RT. 112'



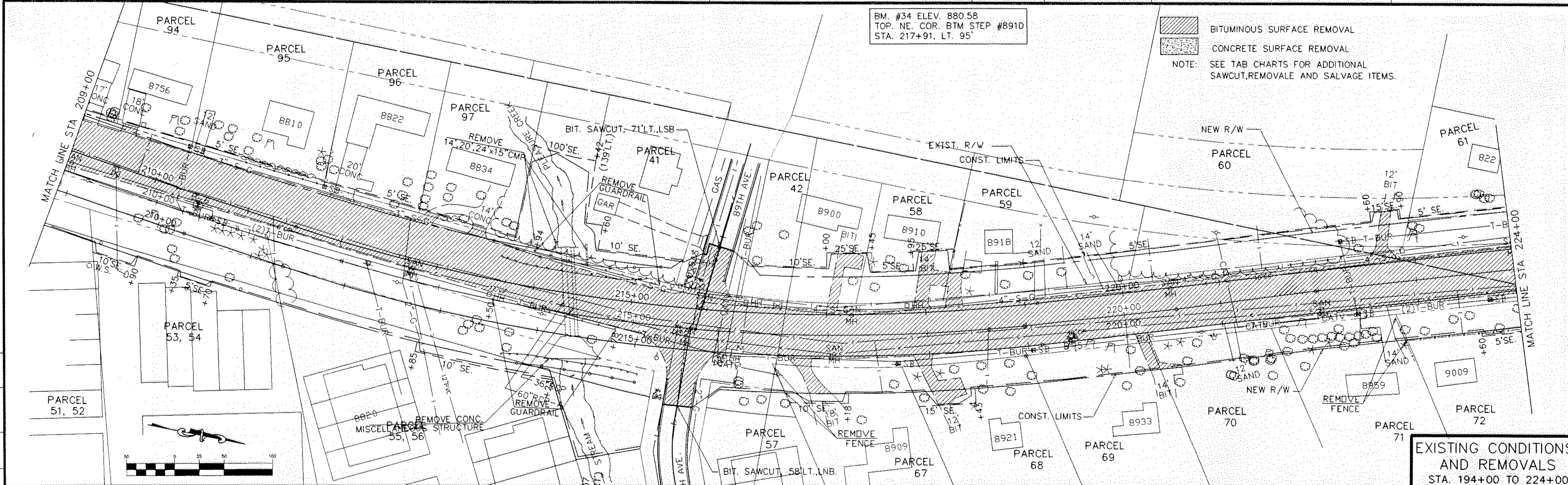
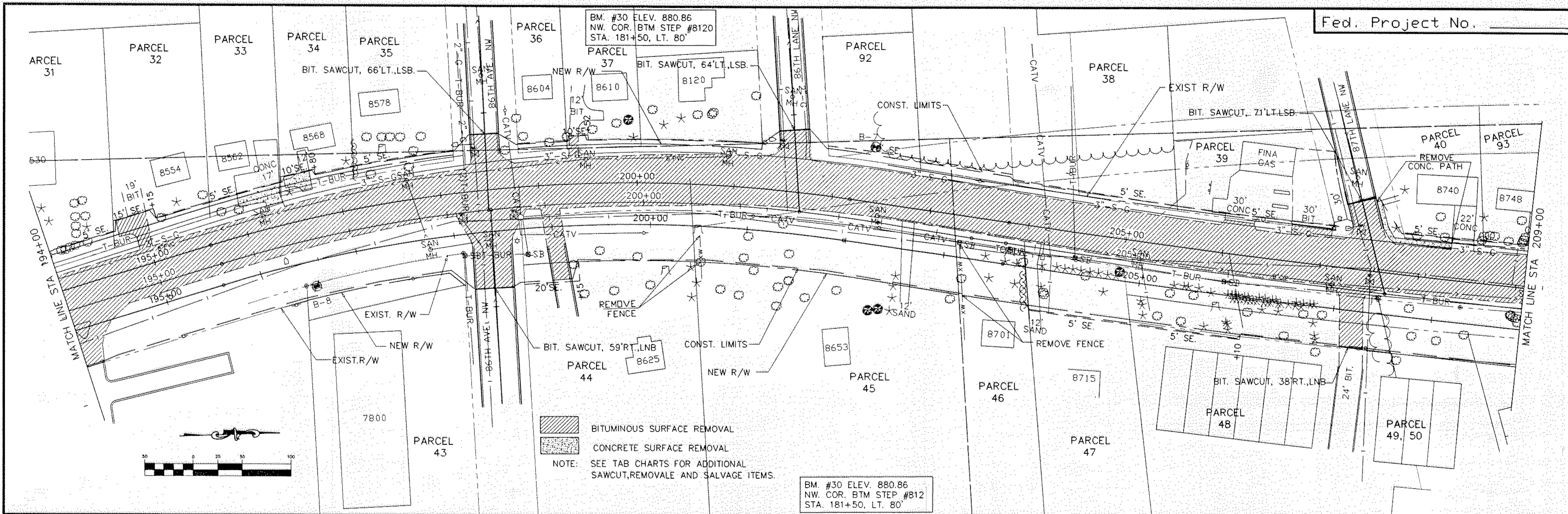
BM. #26 ELEV. 871.50
 NW. COR. BTM STEP #8425
 STA. 181+50, RT. 100'

BM. #27 ELEV. 871.23
 DBL SPIKE PP
 STA. 187+25, RT. 65'

EXISTING CONDITIONS
 AND REMOVALS
 STA. 165+00 TO 194+00

| REVISIONS | DATE | BY |
|-----------|------|----|
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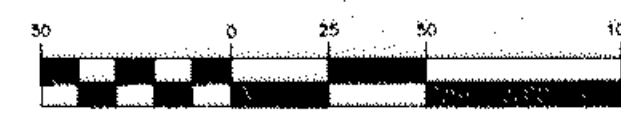
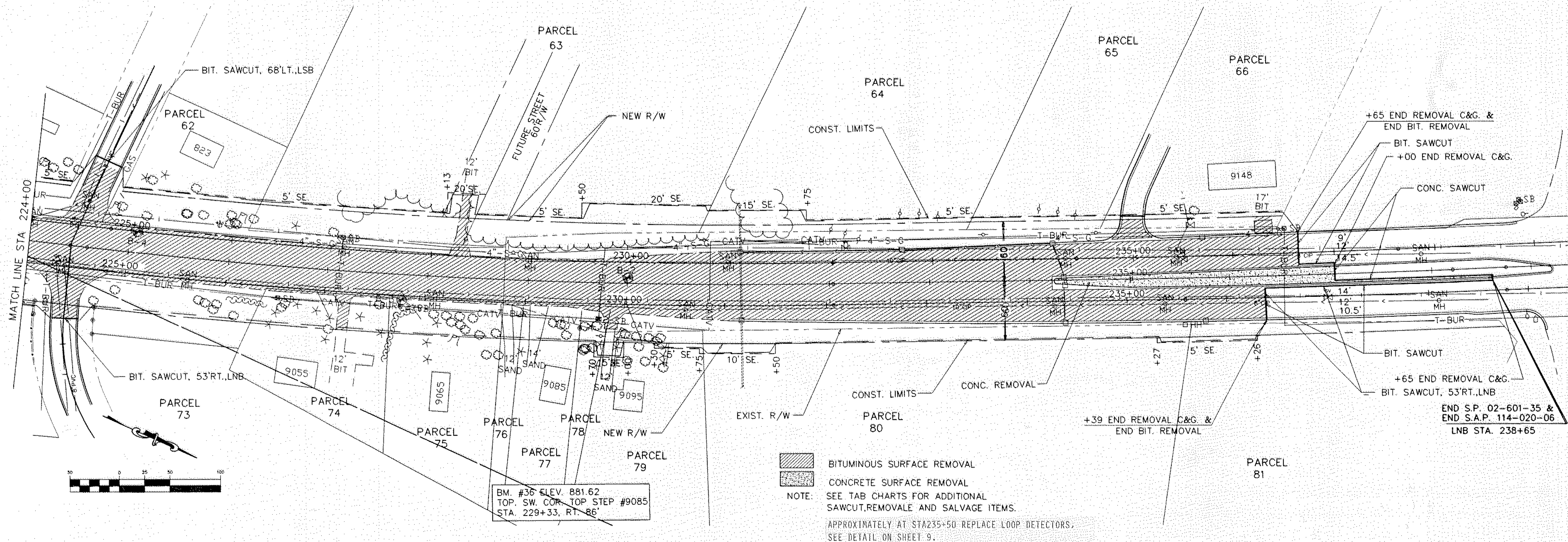
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EXISTING CONDITIONS AND REMOVALS
STA. 194+00 TO 224+00

| REVISIONS | DATE | BY |
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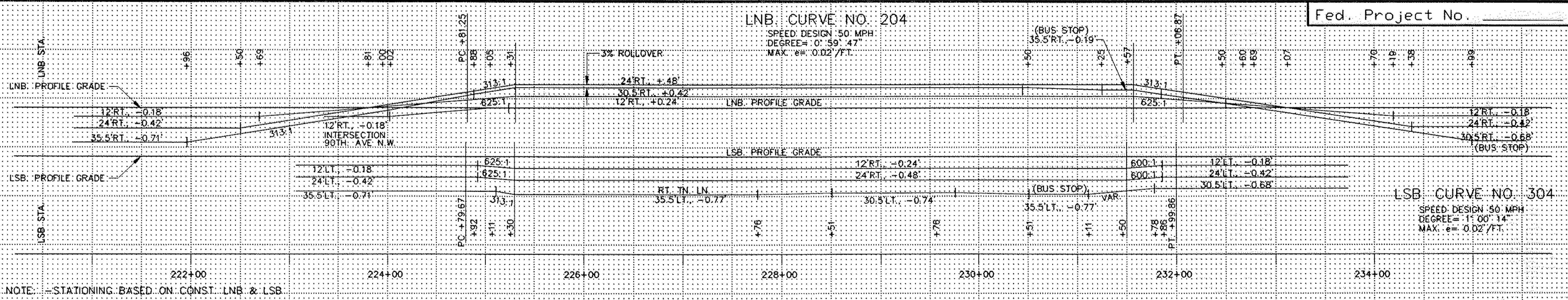
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EXISTING CONDITIONS AND REMOVALS STA. 224+00 TO 239+00

LNB CURVE NO. 204

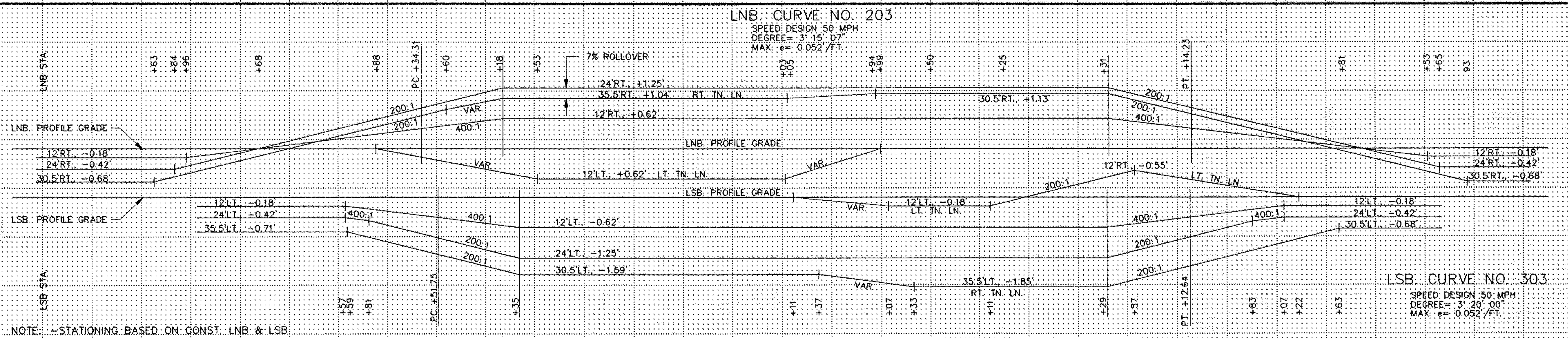
SPEED DESIGN 50 MPH
DEGREE = 0° 59' 47"
MAX. e = 0.02 / FT.



NOTE: -STATIONING BASED ON CONST. LNB & LSB

LNB CURVE NO. 203

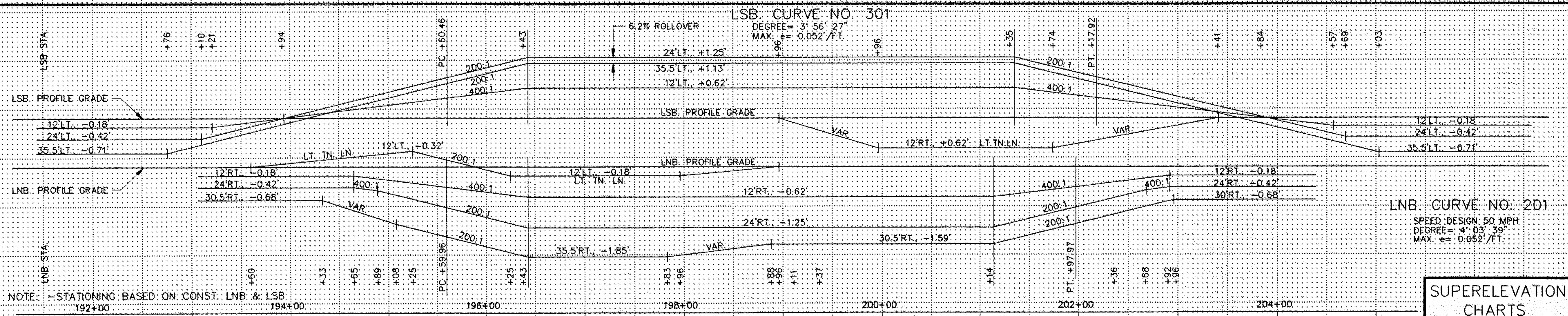
SPEED DESIGN 50 MPH
DEGREE = 3° 15' 07"
MAX. e = 0.052 / FT.



NOTE: -STATIONING BASED ON CONST. LNB & LSB

LSB CURVE NO. 301

DEGREE = 3° 56' 27"
MAX. e = 0.052 / FT.



NOTE: -STATIONING BASED ON CONST. LNB & LSB

SUPERELEVATION CHARTS

| REVISIONS | DATE | BY |
|-----------|------|----|
| | | |
| | | |

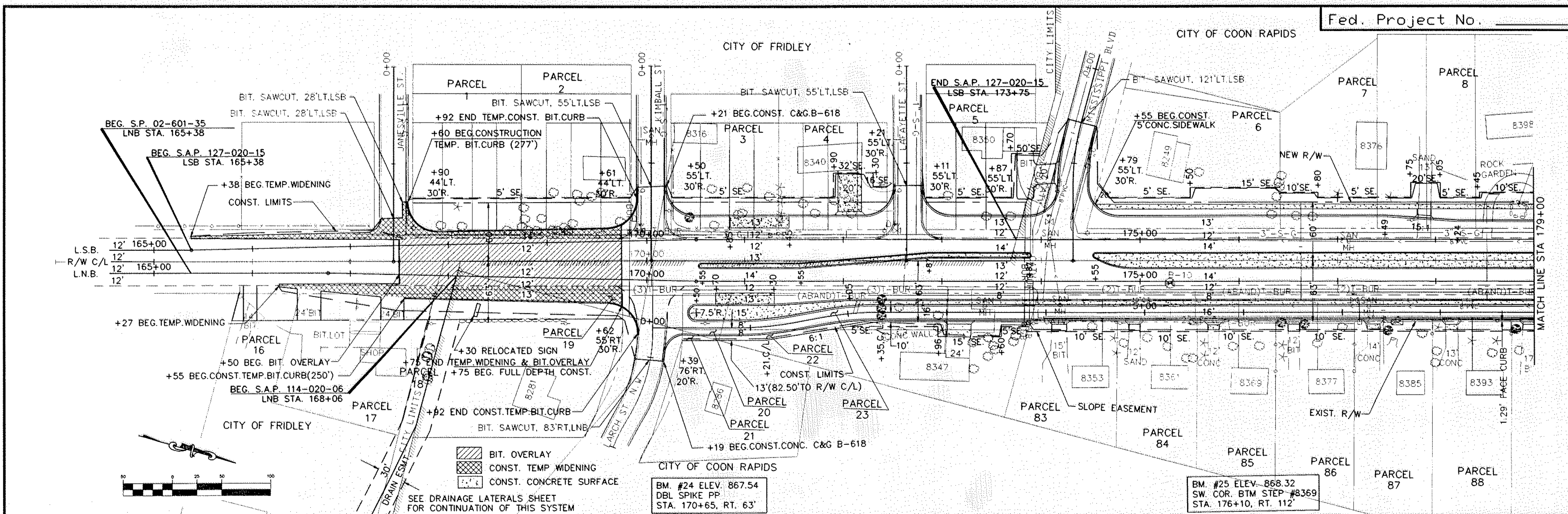
CERTIFIED BY Douglas M. Torrey P.E. REG. NO. 20235 3/22 19 95

S.P. 02-601-35 S.A.P. 114-020-06 127-020-15 C.P.

Sheet No. 21 of 85 Sheets

CITY OF FRIDLEY

CITY OF COON RAPIDS

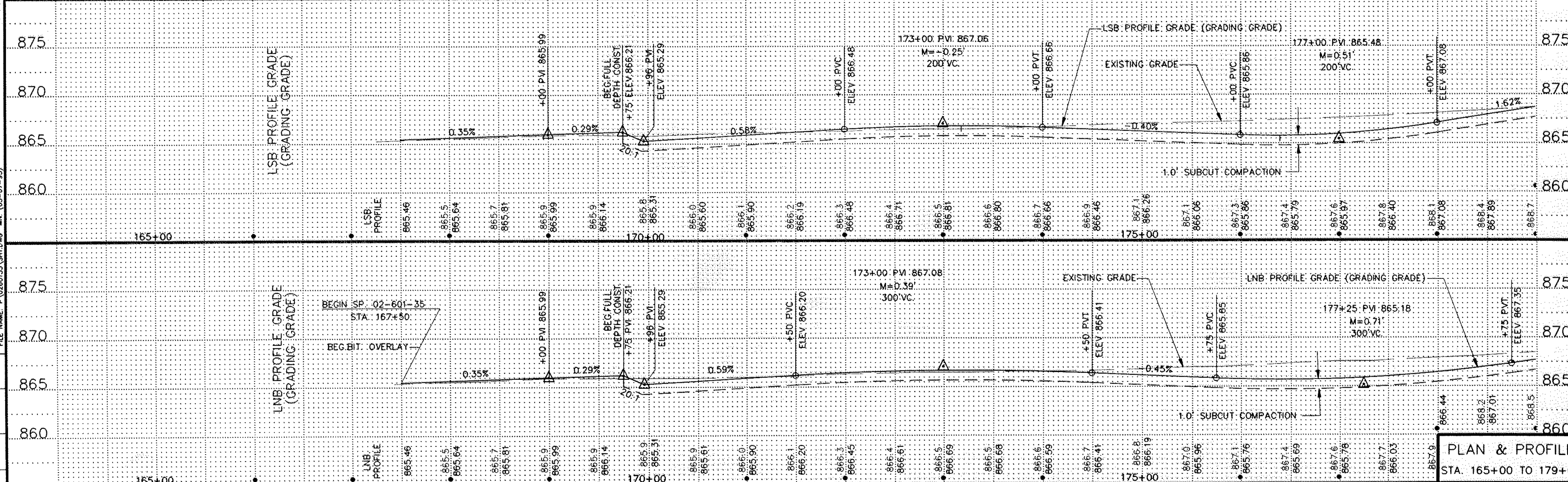


- BIT. OVERLAY
- CONST. TEMP. WIDENING
- CONST. CONCRETE SURFACE

SEE DRAINAGE LATERALS SHEET FOR CONTINUATION OF THIS SYSTEM

BM. #24 ELEV. 867.54
DBL SPIKE PP
STA. 170+65, RT. 63'

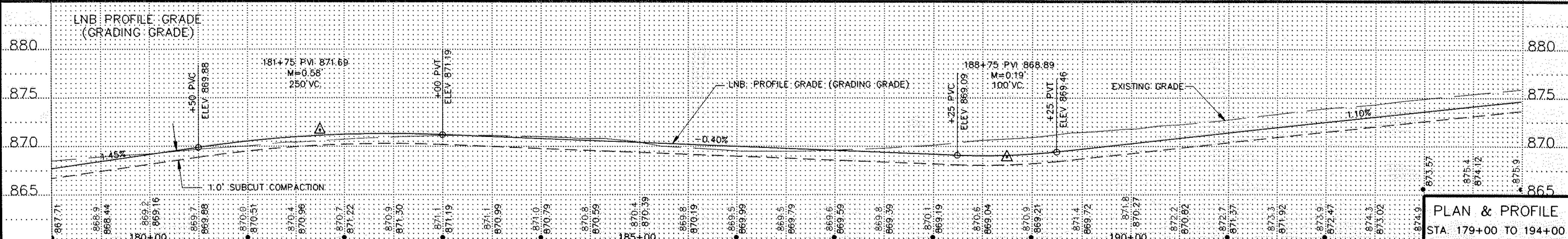
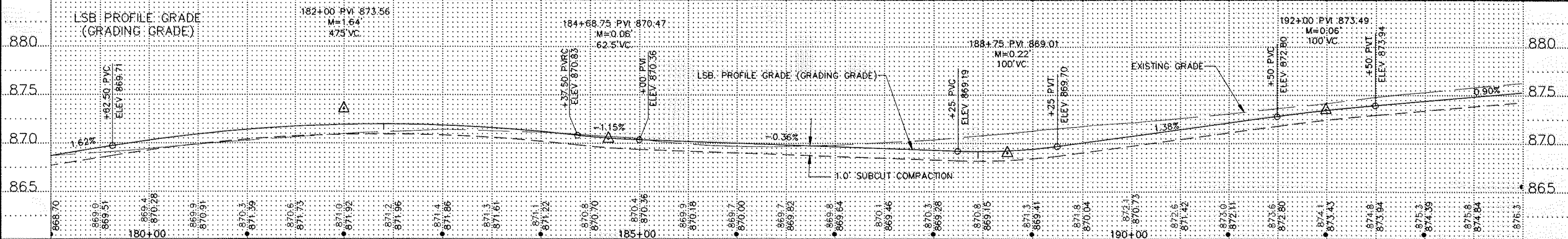
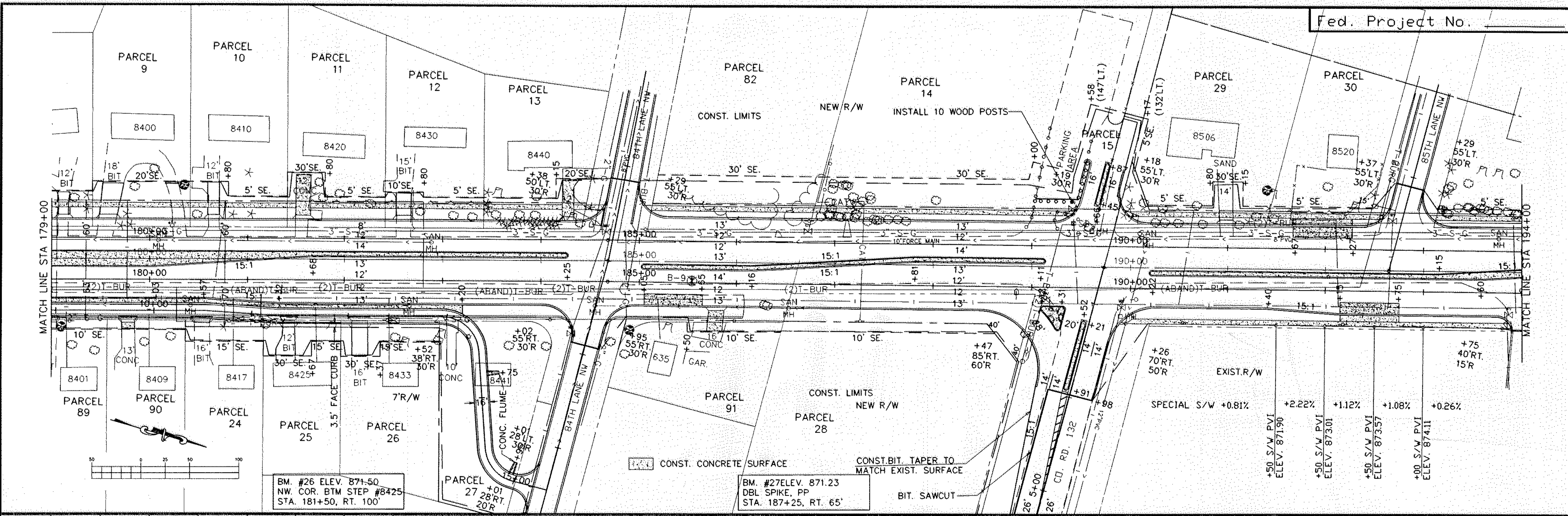
BM. #25 ELEV. 868.32
SW. COR. BTM STEP #8369
STA. 176+10, RT. 112'



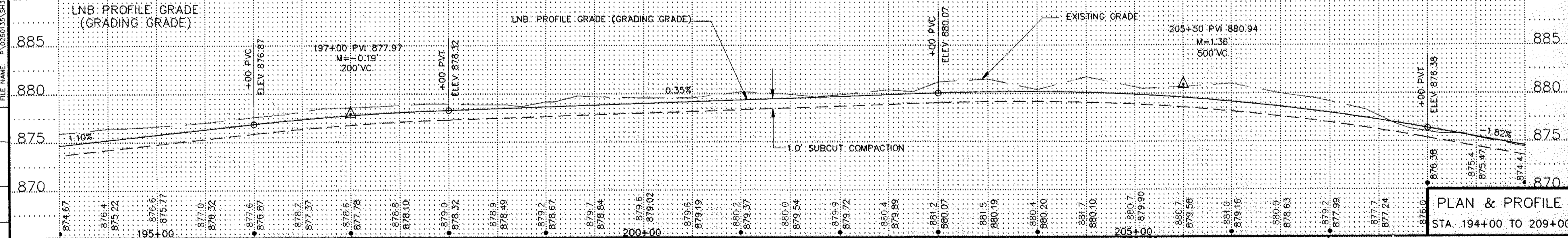
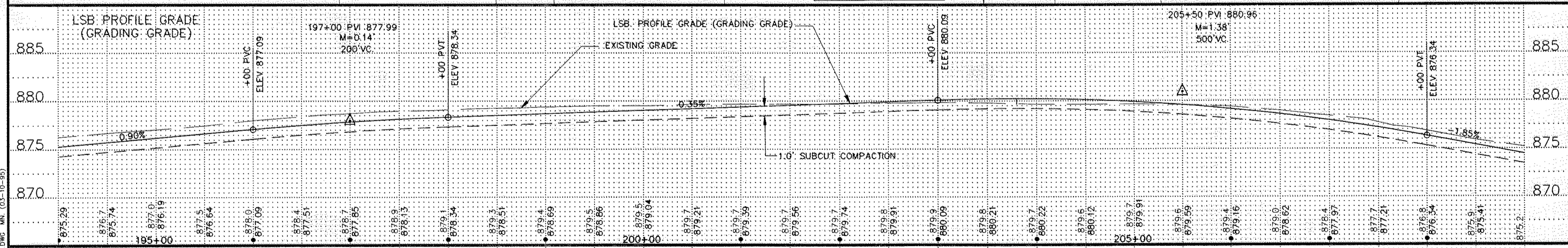
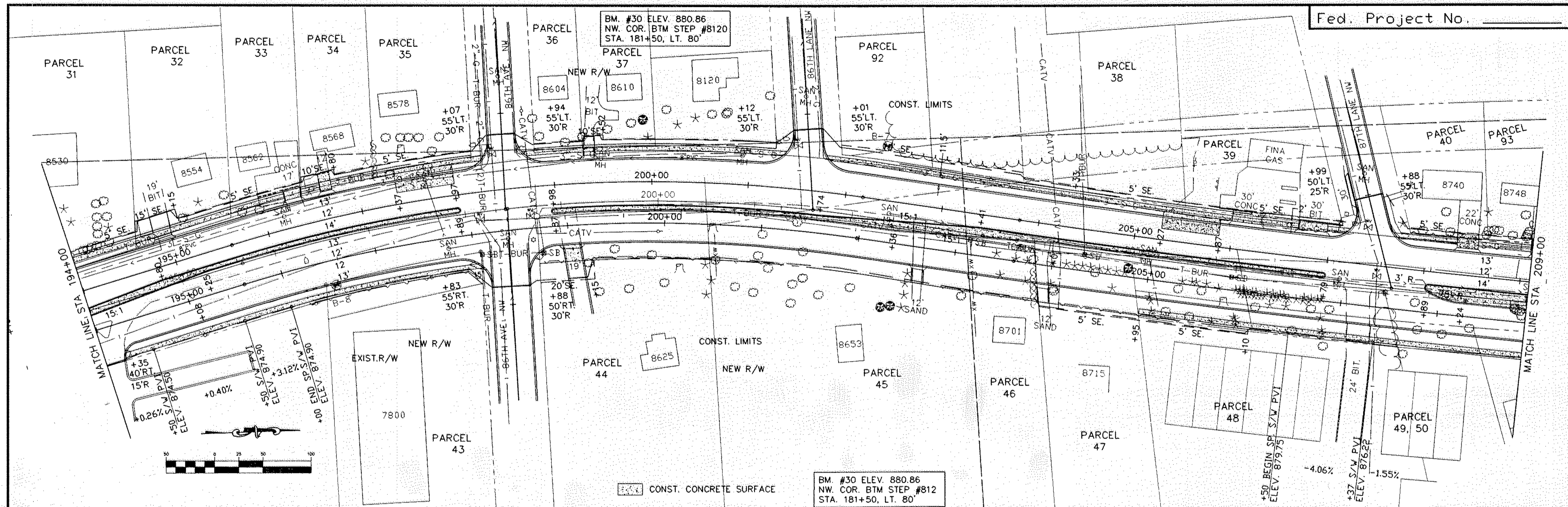
PLAN & PROFILE
STA. 165+00 TO 179+00

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FILE NAME: P:\0260\35\SHI.DWG MN. (03-07-95)



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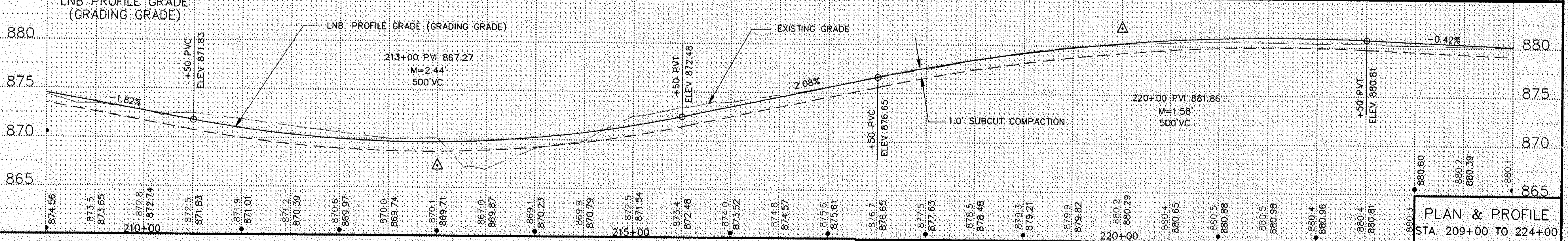
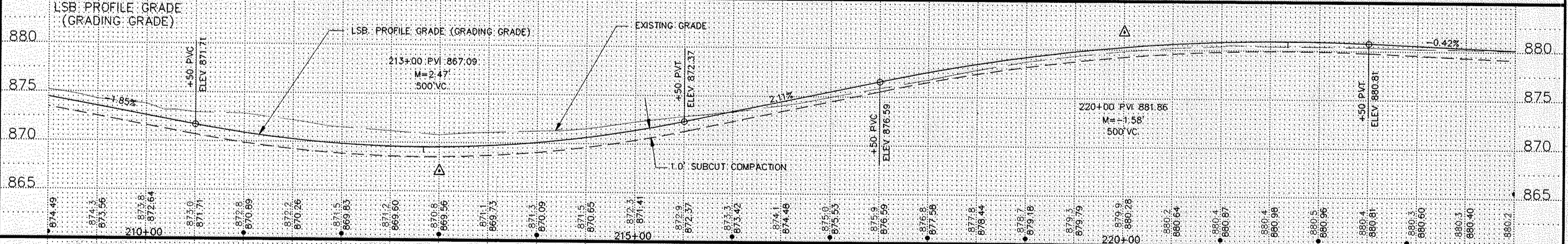
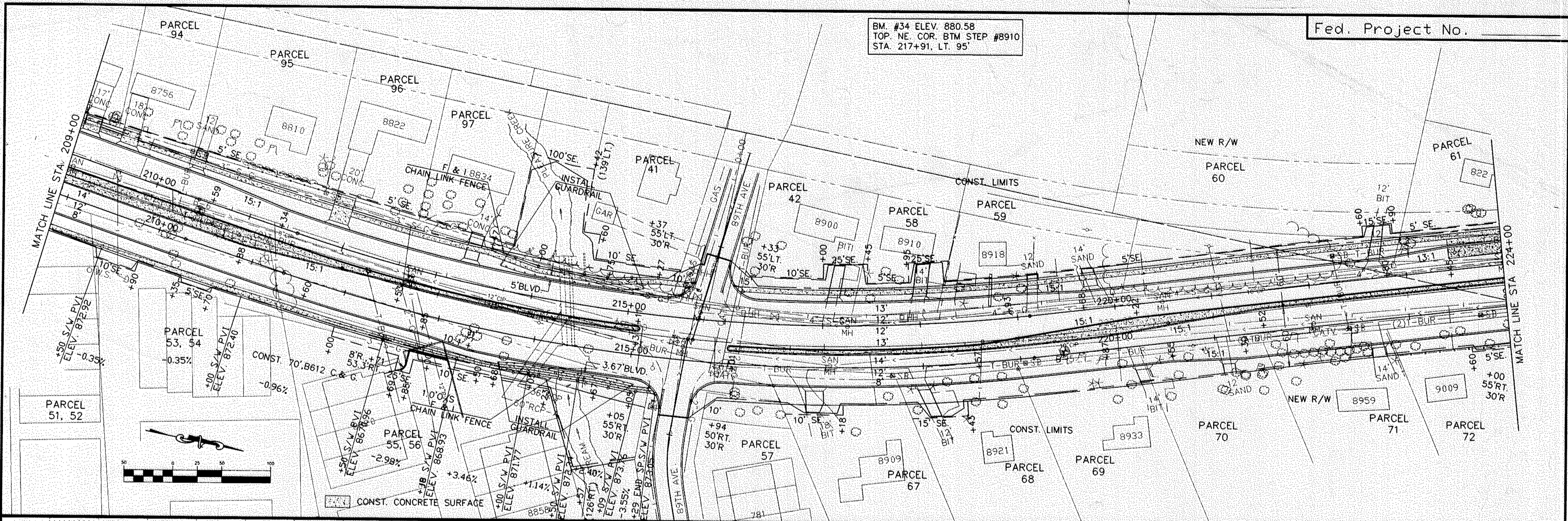


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PLAN & PROFILE
STA. 194+00 TO 209+00

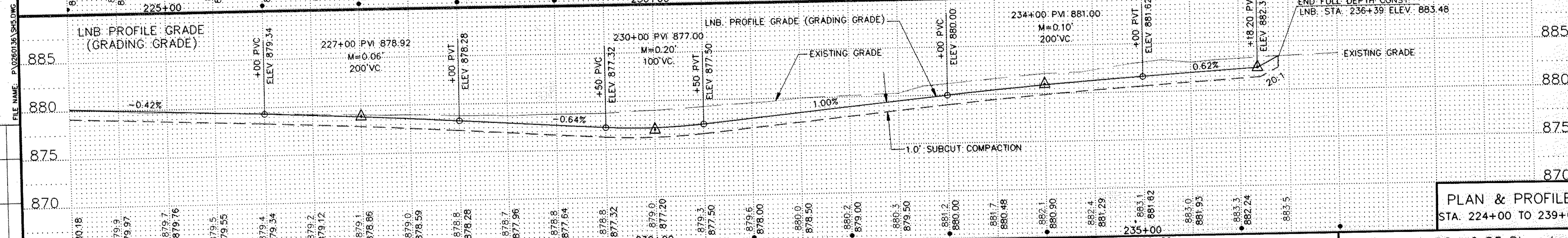
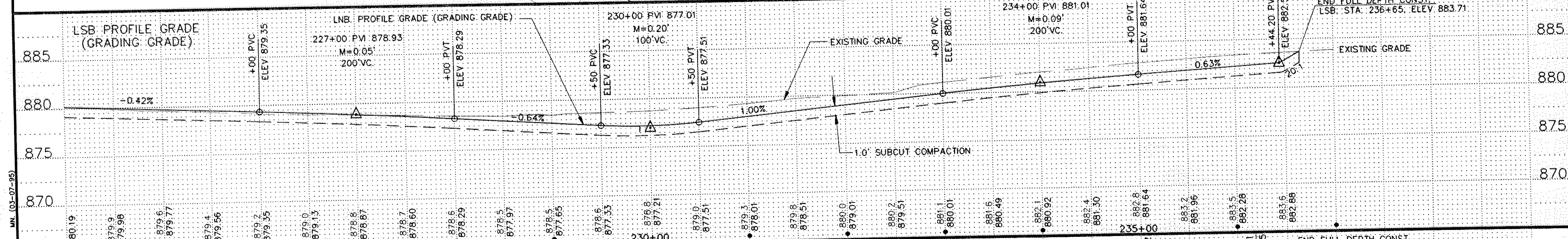
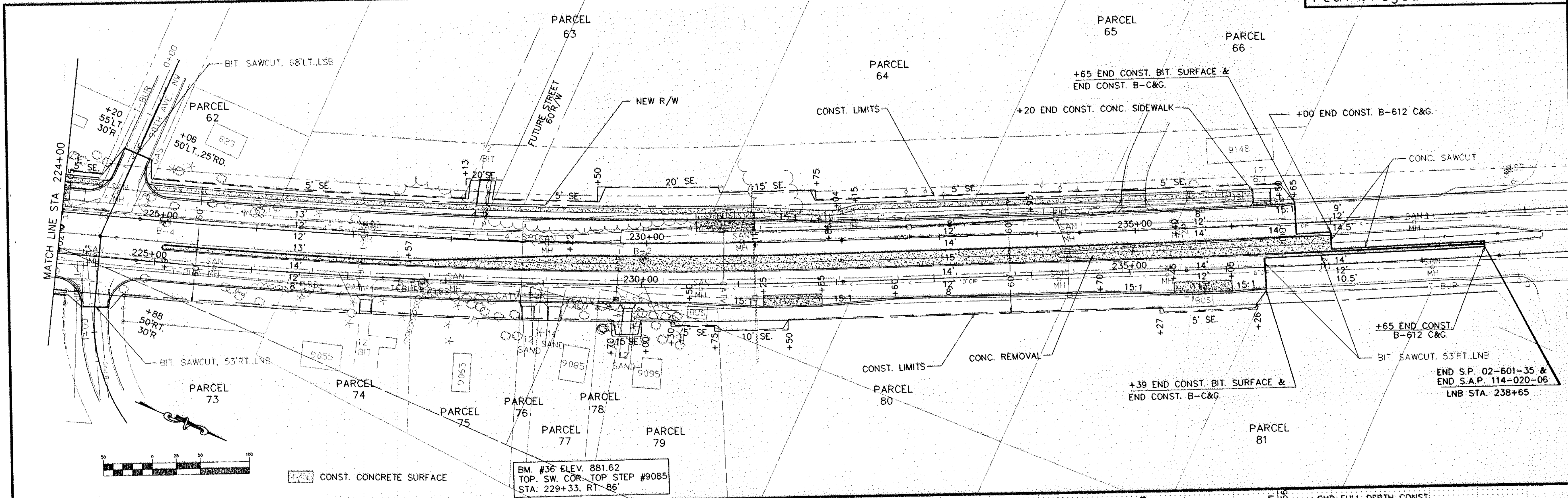
BM. #34 ELEV. 880.58
TOP. NE. COR. BTM STEP #8910
STA. 217+91, LT. 95'

Fed. Project No. _____



PLAN & PROFILE
STA. 209+00 TO 224+00

FILE NAME: P:\0260135\SH4.DWG MIN. (07-04-95)
DATE: 07-05-95 BY: K.J.



| REVISIONS | DATE | BY |
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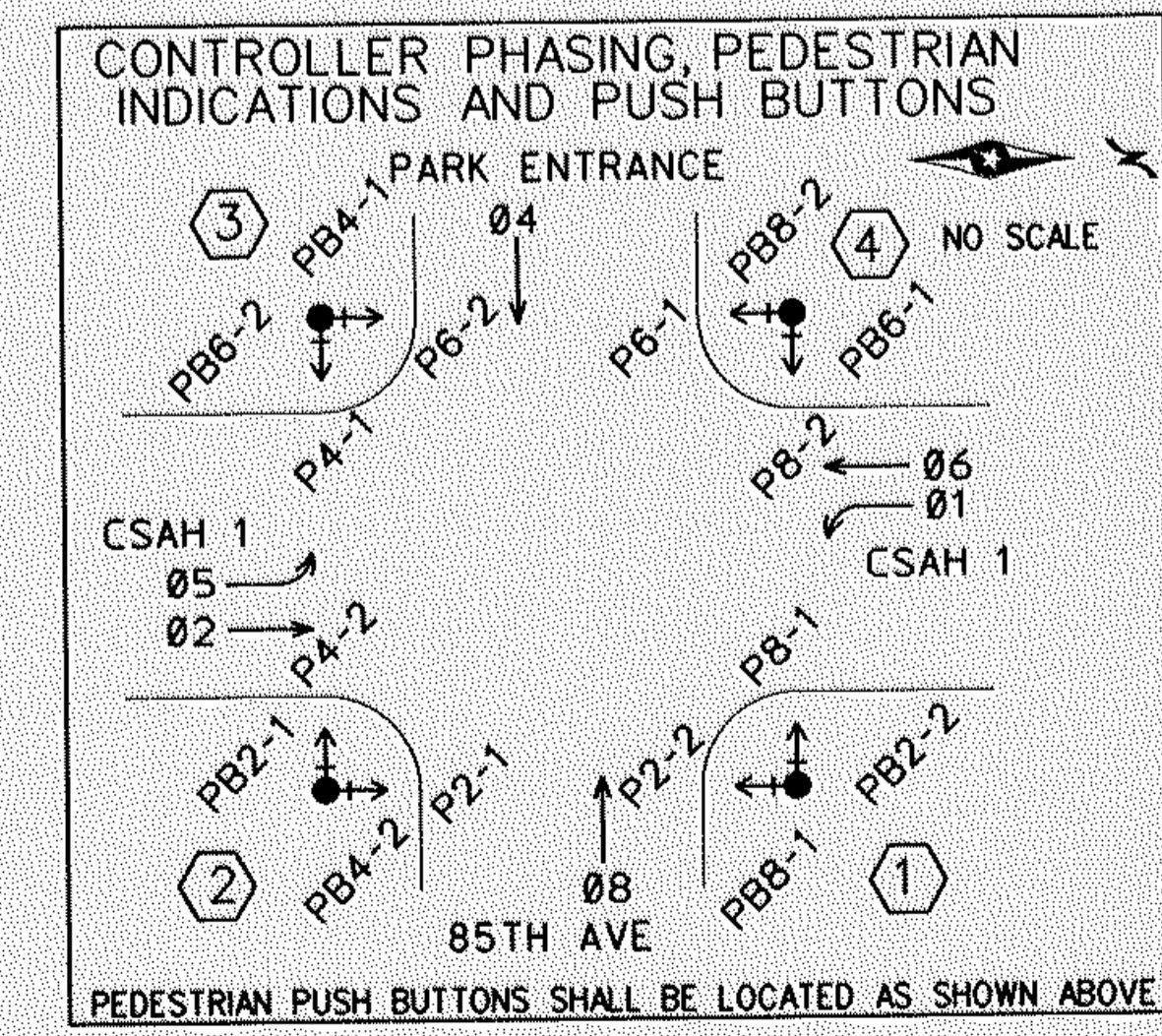
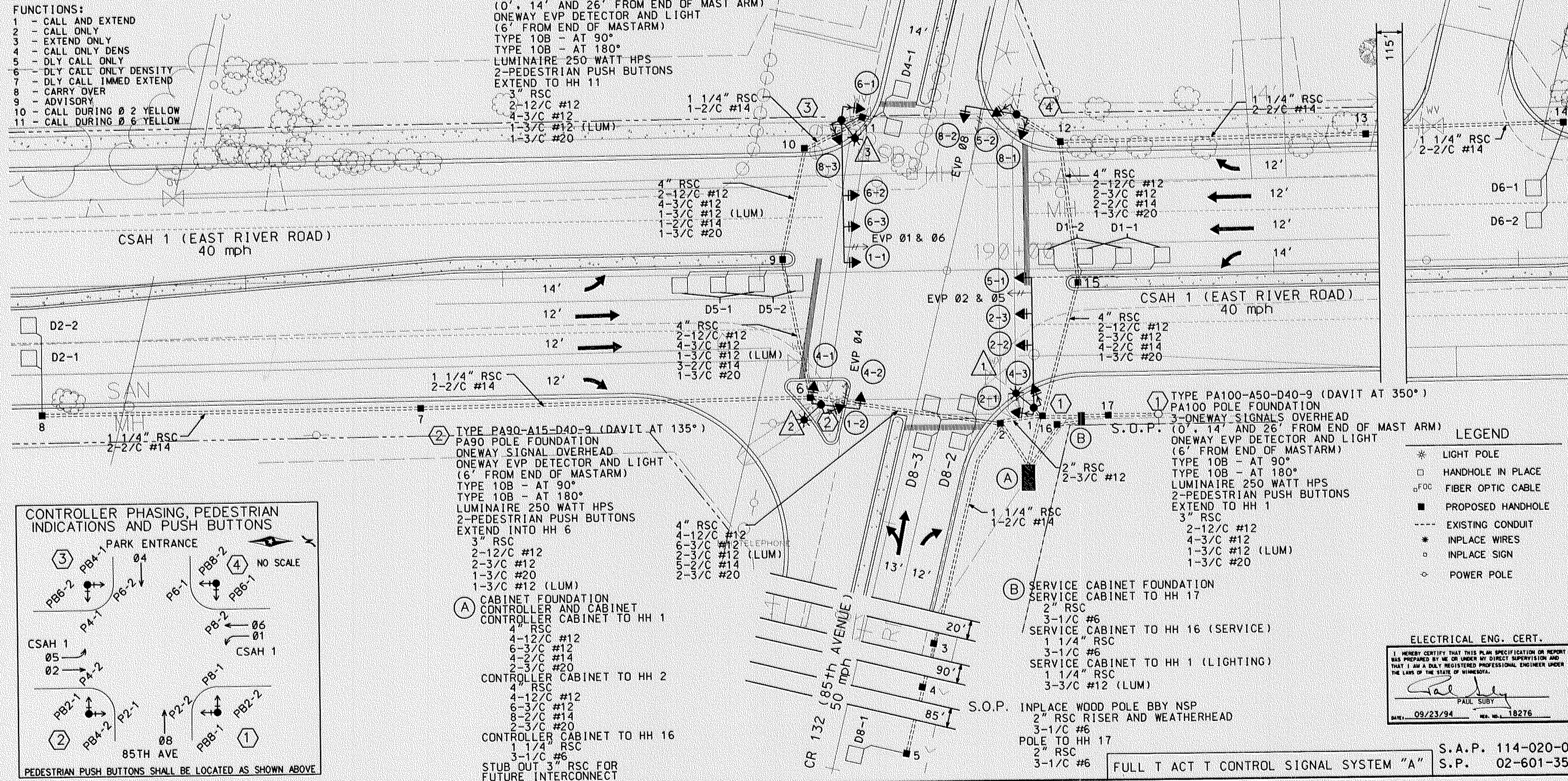
PLAN & PROFILE
STA. 224+00 TO 239+00

| LOOP DETECTORS | | | |
|----------------|-----------|----------|-----------|
| NUMBER | SIZE | FUNCTION | LOCATION |
| D1-1 | 2-6' X 6' | 1 | 20' & 50' |
| D1-2 | 2-6' X 6' | 1 | 5' & 35' |
| D2-1 | 6' X 6' | 1 | 300' |
| D2-2 | 6' X 6' | 1 | 300' |
| D4-1 | 2-6' X 6' | 1/7 | 5' |
| D5-1 | 2-6' X 6' | 1 | 20' & 50' |
| D5-2 | 2-6' X 6' | 1 | 5' & 35' |
| D6-1 | 6' X 6' | 1 | 300' |
| D6-2 | 6' X 6' | 1 | 300' |
| D8-1 | 6' X 6' | 3/8 | 300' |
| D8-2 | 2-6' X 6' | 7 | 5' |
| D8-3 | 2-6' X 6' | 1 | 5' |

- NOTES:
- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - EACH LUMINAIRE SHALL HAVE A PEC AND CHECK SWITCH.
 - SEE SHEET NO. 5 AND SPECIAL PROVISIONS FOR SERVICE CABINET DETAILS.
 - DIRECTIONAL SIGNS (TYPE D) TO BE FURNISHED AND INSTALLED ON MAST ARMS AT POLES 1,2,3, AND 4 SHALL BE CONSIDERED INCIDENTAL.
 - SEE SPECIAL PROVISIONS FOR HANDHOLE TYPE.
 - SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR LOCATION OF UTILITIES.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
 - ALL SIGNAL FACES SHALL BE 12 INCH 3 SECTION R-Y-G, EXCEPT FACES (1-1) (1-2) (5-1) (5-2) WHICH SHALL BE 12 INCH 3 SECTION RLTA-YLTA-GLTA.
 - ALL VEHICLE SIGNAL INDICATIONS AND PEDESTRIAN INDICATIONS SHALL USE GLASS LENSES.
 - ALL LOOP DETECTORS SHALL BE INSTALLED IN NMC CONDUIT (SEE SHEET 32).

LOCATION-DISTANCE FROM STOP LINE TO DETECTOR

- FUNCTIONS:
- CALL AND EXTEND
 - CALL ONLY
 - EXTEND ONLY
 - CALL ONLY DENS
 - DLY CALL ONLY
 - DLY CALL ONLY DENSITY
 - DLY CALL IMMED EXTEND
 - CARRY OVER
 - ADVISORY
 - CALL DURING Ø 2 YELLOW
 - CALL DURING Ø 6 YELLOW



③ TYPE PA100-A55-D40-9 (DAVIT AT 350°)
 PA100 POLE FOUNDATION
 3-ONEWAY SIGNALS OVERHEAD
 (0', 14' AND 26' FROM END OF MAST ARM)
 ONEWAY EVP DETECTOR AND LIGHT
 (6' FROM END OF MASTARM)
 TYPE 10B - AT 90°
 TYPE 10B - AT 180°
 LUMINAIRE 250 WATT HPS
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND TO HH 11
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

② TYPE PA90-A15-D40-9 (DAVIT AT 135°)
 PA90 POLE FOUNDATION
 ONEWAY SIGNAL OVERHEAD
 ONEWAY EVP DETECTOR AND LIGHT
 (6' FROM END OF MASTARM)
 TYPE 10B - AT 90°
 TYPE 10B - AT 180°
 LUMINAIRE 250 WATT HPS
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND INTO HH 6
 3" RSC
 2-12/C #12
 2-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

Ⓐ CABINET FOUNDATION
 CONTROLLER AND CABINET
 CONTROLLER CABINET TO HH 1
 4" RSC
 4-12/C #12
 6-3/C #12
 4-2/C #14
 2-3/C #20
 CONTROLLER CABINET TO HH 2
 4" RSC
 4-12/C #12
 6-3/C #12
 8-2/C #14
 2-3/C #20
 CONTROLLER CABINET TO HH 16
 1 1/4" RSC
 3-1/C #6
 STUB OUT 3" RSC FOR
 FUTURE INTERCONNECT

④ TYPE PA90-A20
 PA90 POLE FOUNDATION
 ONEWAY SIGNAL OVERHEAD
 ONEWAY EVP DETECTOR AND LIGHT
 (6' FROM END OF MASTARM)
 TYPE 10B - AT 90°
 TYPE 10B - AT 180°
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND INTO HH 12
 3" RSC
 2-12/C #12
 2-3/C #12
 1-3/C #20

① TYPE PA100-A50-D40-9 (DAVIT AT 350°)
 PA100 POLE FOUNDATION
 3-ONEWAY SIGNALS OVERHEAD
 (0', 14' AND 26' FROM END OF MAST ARM)
 ONEWAY EVP DETECTOR AND LIGHT
 (6' FROM END OF MASTARM)
 TYPE 10B - AT 90°
 TYPE 10B - AT 180°
 LUMINAIRE 250 WATT HPS
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND TO HH 1
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

Ⓑ SERVICE CABINET FOUNDATION
 SERVICE CABINET TO HH 17
 2" RSC
 3-1/C #6
 SERVICE CABINET TO HH 16 (SERVICE)
 1 1/4" RSC
 3-1/C #6
 SERVICE CABINET TO HH 1 (LIGHTING)
 1 1/4" RSC
 3-3/C #12 (LUM)

S.O.P. INPLACE WOOD POLE BBY NSP
 2" RSC RISER AND WEATHERHEAD
 3-1/C #6
 POLE TO HH 17
 2" RSC
 3-1/C #6

- LEGEND
- * LIGHT POLE
 - HANDHOLE IN PLACE
 - FOC FIBER OPTIC CABLE
 - PROPOSED HANDHOLE
 - EXISTING CONDUIT
 - * INPLACE WIRES
 - INPLACE SIGN
 - POWER POLE

ELECTRICAL ENG. CERT.
 I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 Paul J. Schelen
 PAUL J. SHELLEN
 DATE: 09/23/94 REG. NO.: 18276

S.A.P. 114-020-06
 S.P. 02-601-35

FULL TACT CONTROL SIGNAL SYSTEM "A"

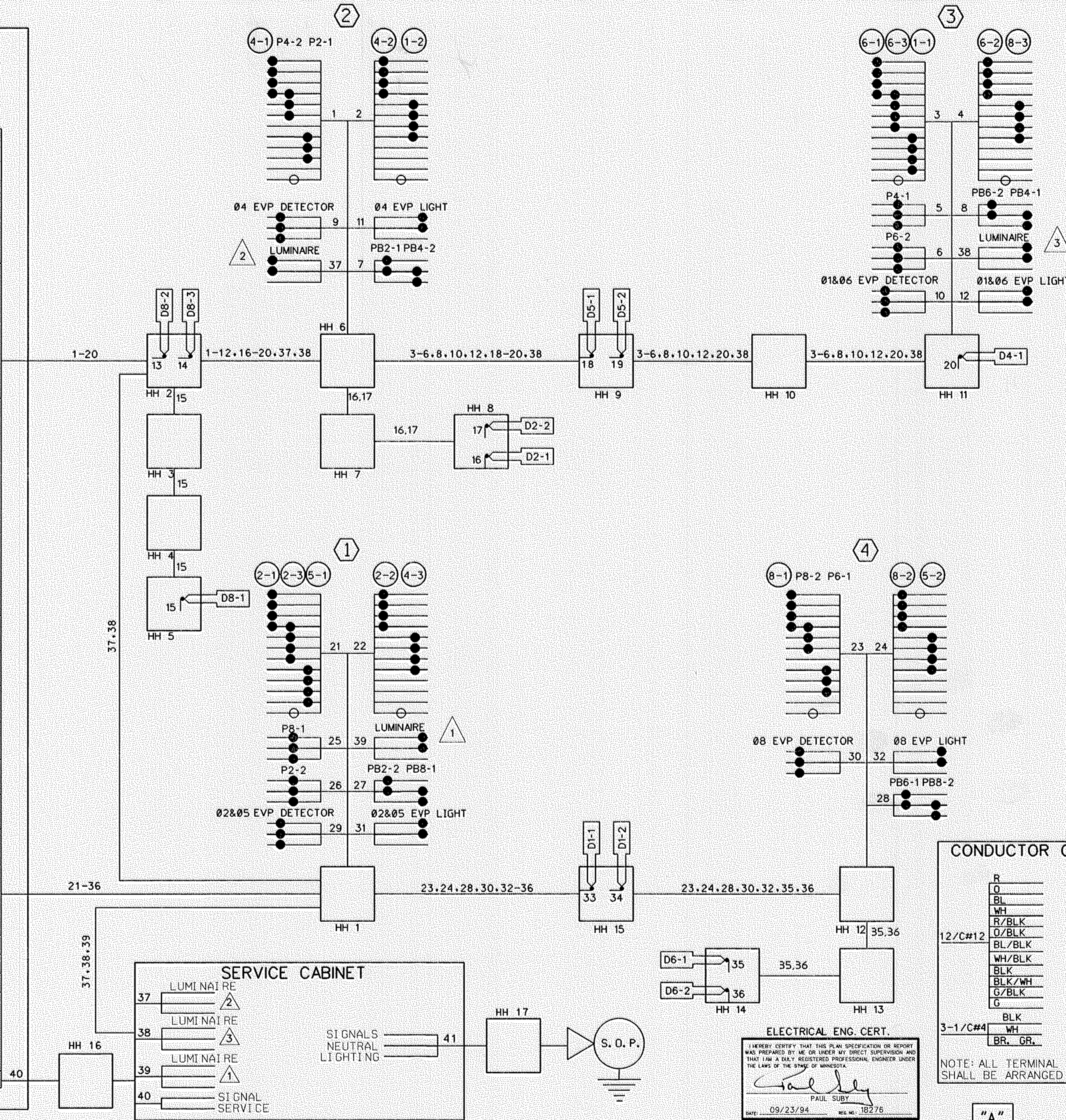
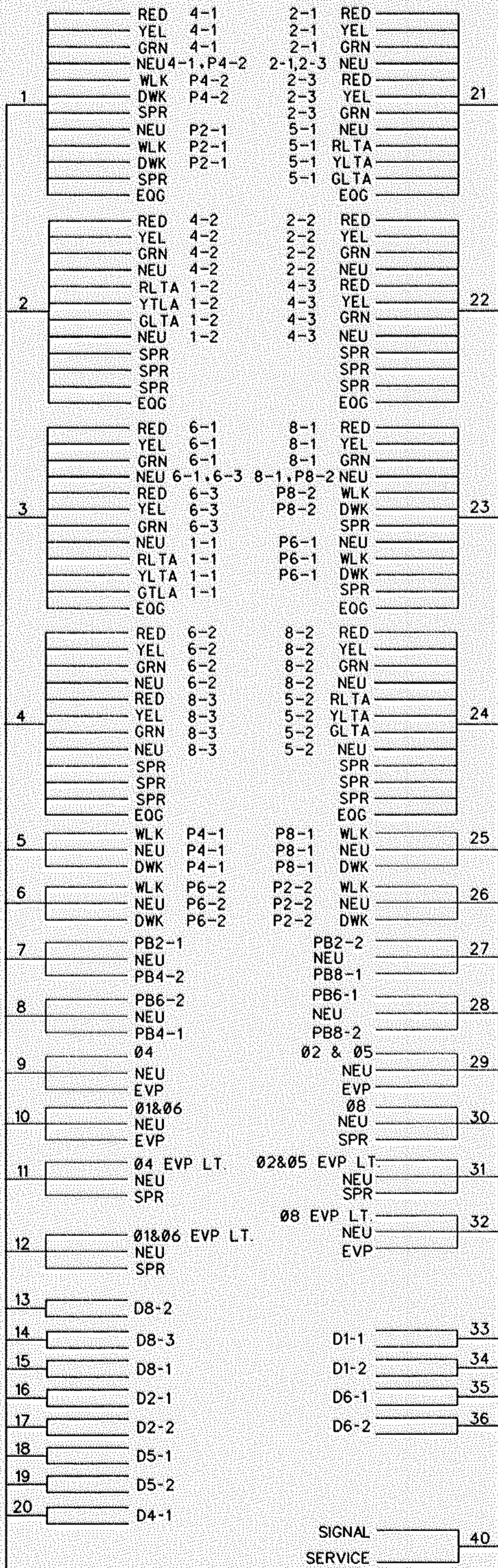
INTERSECTION LAYOUT
 CSAH 1 (EAST RIVER ROAD)
 AND CR 132 (85TH AVENUE NW)
 COON RAPIDS, MINNESOTA
 S.P. 02-601-35

ORR Schelen Mayron & Associates, Inc.
 Engineers & Architects Planners & Surveyors
 300 Park Place Center 5775 Wayzata Boulevard
 COON RAPIDS, MN 55015

REVISION NO. DATE BY COMMENTS
 02/28/95
 AS NOTED
 SCALE: PLAN BY: DESIGN BY: CHECKED BY: RECORDED COPY BY: DATE
 CJK CTR LOMANO J 511-411
 RBB 09/23/94 18276

PLAN NO. SH 27 OF 1

CONTROLLER CABINET



CONDUCTOR COLOR CODING

| | | |
|---------|-----------|----------|
| R | BLK | 2-1/C#10 |
| O | WH | |
| BL | | |
| WH | R | 3/C#12 |
| R/BLK | WH | |
| O/BLK | BLK | |
| BL/BLK | | |
| WH/BLK | R OR O | 3/C#20 |
| BLK | WH OR YEL | |
| BLK/WH | BLK OR BL | |
| G/BLK | | |
| G | BLK | 2/C#14 |
| | CLEAR | |
| 3-1/C#4 | BLK | |
| | WH | |
| | BR, GR. | |

ELECTRICAL ENG. CERT.
 I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PAUL SUBY
 DATE: 09/23/94 REG. NO.: 18276

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

"A"

S.A.P. 114-020-06
 S.P. 02-601-35

CSAH 1 (EAST RIVER ROAD) AND CR 192 (85TH AVENUE NW) COON RAPIDS, MINNESOTA

CSAH 114-020-06 S.P. 02-601-35

ORR Schelen Mayeron & Associates, Inc.
 Engineers - Architects - Planners - Surveyors
 300 Park Place Center - 5775 Wayzata Boulevard
 Minneapolis, MN 55416-1228 - 612-595-5775

REVISION NO. DATE EXPLANATION

SCALE: AS NOTED

DESIGN BY: CTR

CHECKED BY: RBH

COMMAND: 51141

RECORD COPY BY: DATE

REVISION NO. DATE EXPLANATION

DATE: 09/23/94 REG. NO.: 18276

PLAN NO. SH 28 OF 85

| LOOP DETECTORS | | | |
|----------------|-----------|----------|-----------|
| NUMBER | SIZE | FUNCTION | LOCATION |
| D1-1 | 2-6' X 6' | 1 | 20' & 50' |
| D1-2 | 2-6' X 6' | 1 | 5' & 35' |
| D2-1 | 6' X 6' | 1 | 300' |
| D2-2 | 6' X 6' | 1 | 300' |
| D4-1 | 6' X 6' | 3/8 | 120' |
| D4-2 | 2-6' X 6' | 7 | 5' |
| D5-1 | 2-6' X 6' | 1 | 20' & 50' |
| D5-2 | 2-6' X 6' | 1 | 5' & 35' |
| D6-1 | 6' X 6' | 1 | 300' |
| D6-2 | 6' X 6' | 1 | 300' |
| D8-1 | 6' X 6' | 3/8 | 120' |
| D8-2 | 2-6' X 6' | 7 | 5' |

- NOTES:
- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - EACH LUMINAIRE SHALL HAVE A PEC AND CHECK SWITCH.
 - SEE SHEET NO. 5 AND SPECIAL PROVISIONS FOR SERVICE CABINET DETAILS.
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LOCATION-DISTANCE FROM STOP LINE TO DETECTOR

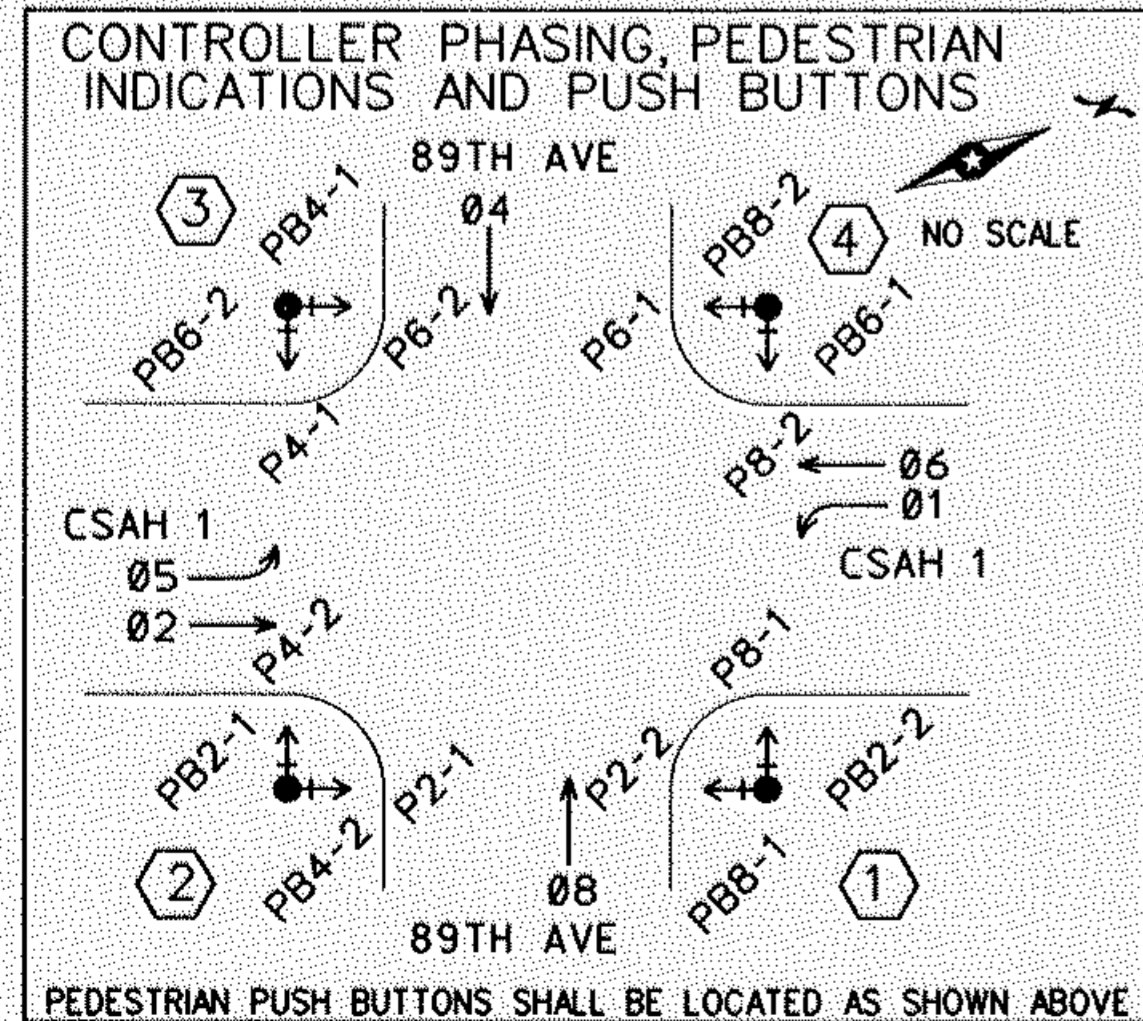
- FUNCTIONS:
- CALL AND EXTEND
 - CALL ONLY
 - EXTEND ONLY
 - CALL ONLY DENS
 - DLY CALL ONLY
 - DLY CALL ONLY DENSITY
 - DLY CALL IMMED EXTEND
 - CARRY OVER
 - ADVISORY
 - CALL DURING Ø 2 YELLOW
 - CALL DURING Ø-6 YELLOW

- 3) TYPE PA100-A45-D40-9 (DAVIT AT 350°)
 PA100 POLE FOUNDATION
 3-ONEWAY SIGNALS OVERHEAD (0', 14' AND 26' FROM END OF MAST ARM)
 ONEWAY EVP DETECTOR AND LIGHT (6' FROM END OF MASTARM)
 TYPE 10B - AT 90°
 TYPE 10B - AT 180°
 LUMINAIRE 250 WATT HPS
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND TO HH 9
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

CSAH 1 (EAST RIVER ROAD)
 40 MPH

89TH AVENUE
 30 MPH

CSAH 1 (EAST RIVER ROAD)
 40 MPH



- 2) TYPE PA90-A25
 PA90 POLE FOUNDATION
 ONEWAY SIGNAL OVERHEAD
 ONEWAY EVP DETECTOR AND LIGHT (6' FROM END OF MASTARM)
 TYPE 20B - AT 90°
 TYPE 10B - AT 180°
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND TO HH 4
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20

- A) CABINET FOUNDATION
 CONTROLLER AND CABINET
 CONTROLLER CABINET TO HH 1
 4" RSC
 4-12/C #12
 6-3/C #12
 6-2/C #14
 2-3/C #20
 CONTROLLER CABINET TO HH 2
 4" RSC
 4-12/C #12
 7-3/C #12
 6-2/C #14
 2-3/C #20
 CONTROLLER CABINET TO HH 15
 1 1/4" RSC
 3-1/C #6
 STUB OUT 3" RSC FOR FUTURE INTERCONNECT

- 1) TYPE PA100-A45-D40-9 (DAVIT AT 350°)
 PA100 POLE FOUNDATION
 3-ONEWAY SIGNALS OVERHEAD (0', 14' AND 26' FROM END OF MAST ARM)
 ONEWAY EVP DETECTOR AND LIGHT (6' FROM END OF MASTARM)
 TYPE 10B - AT 90°
 TYPE 10B - AT 180°
 LUMINAIRE 250 WATT HPS
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND TO HH 2
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

- B) SERVICE CABINET FOUNDATION
 SERVICE CABINET TO HH 16
 2" RSC
 3-1/C #6
 SERVICE CABINET TO HH 15 (SERVICE)
 1 1/4" RSC
 3-1/C #6
 SERVICE CABINET TO HH 1 (LIGHTING)
 1 1/4" RSC
 2-3/C #12 (LUM)
 S.O.P. INPLACE WOOD POLE BY NSP
 2" RSC RISER AND WEATHERHEAD
 POLE TO HH 16
 2" RSC
 3-1/C #6

- LEGEND
- LIGHT POLE
 - HANDHOLE IN PLACE
 - FOC FIBER OPTIC CABLE
 - PROPOSED HANDHOLE
 - EXISTING CONDUIT
 - * INPLACE WIRES
 - INPLACE SIGN
 - POWER POLE

ELECTRICAL ENG. CERT.
 I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PAUL SUBBY
 DATE: 09/23/94 REG. NO.: 18276

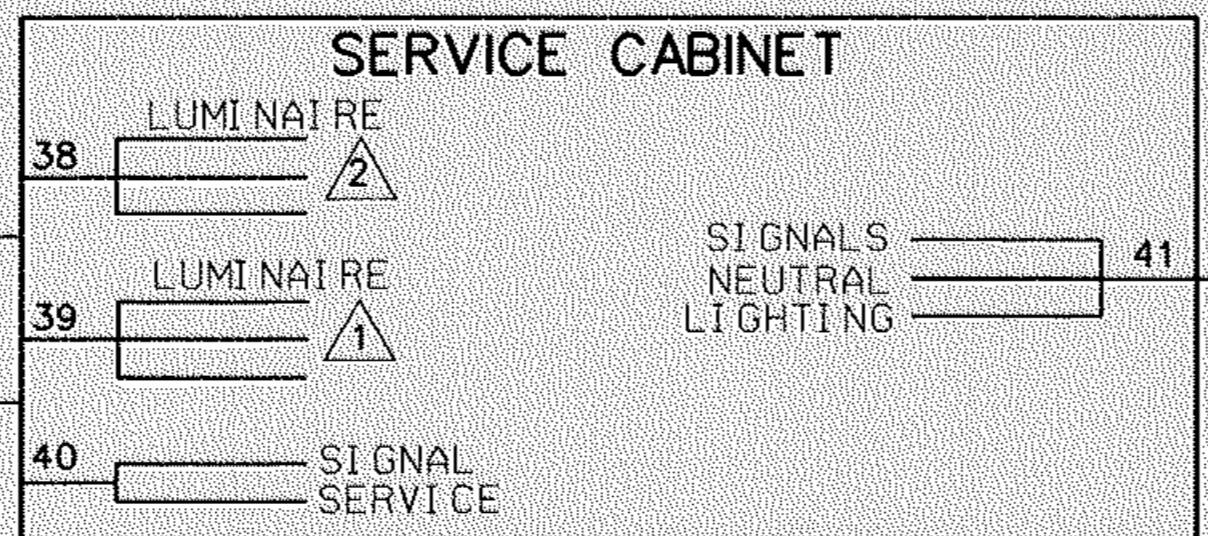
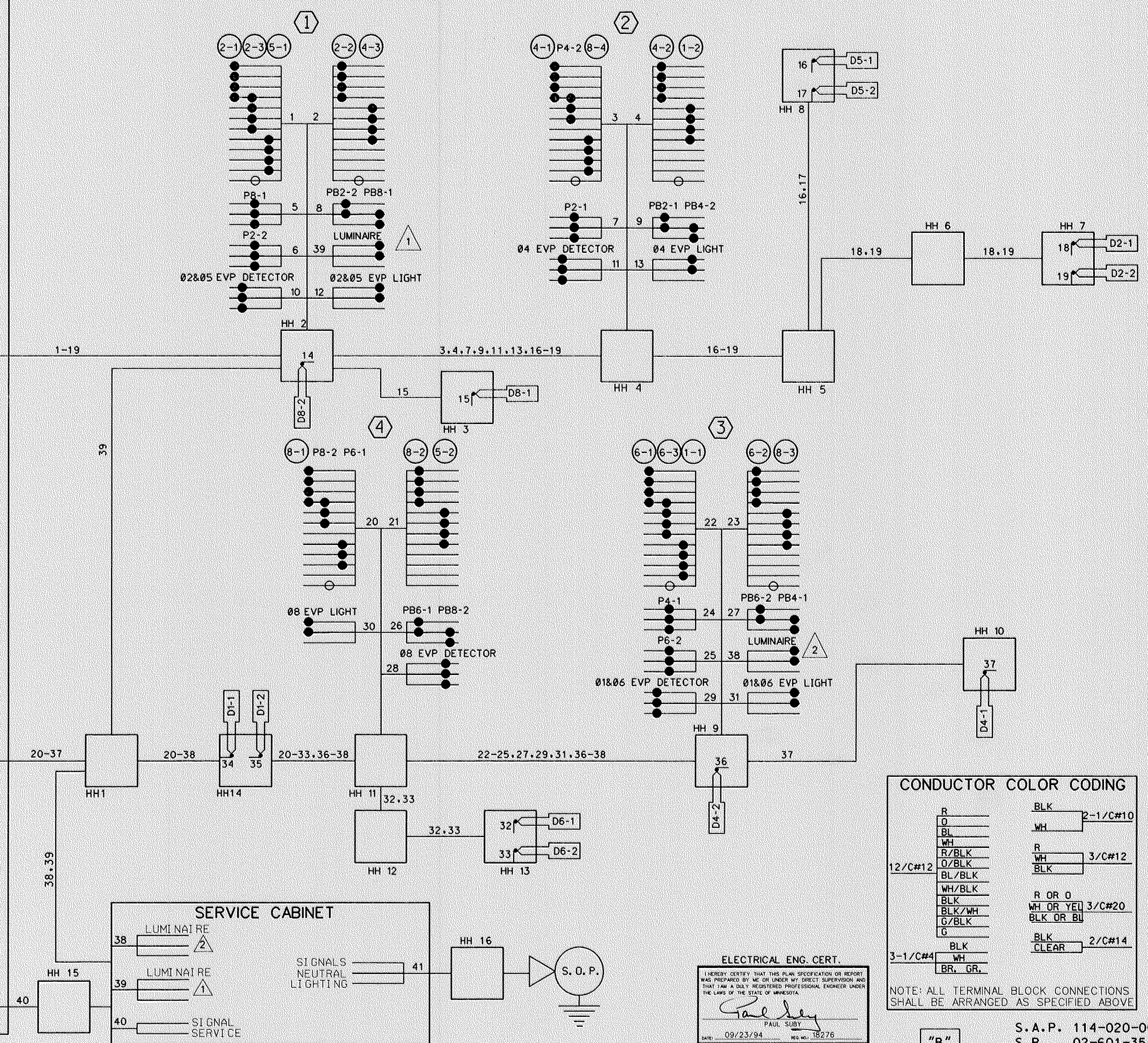
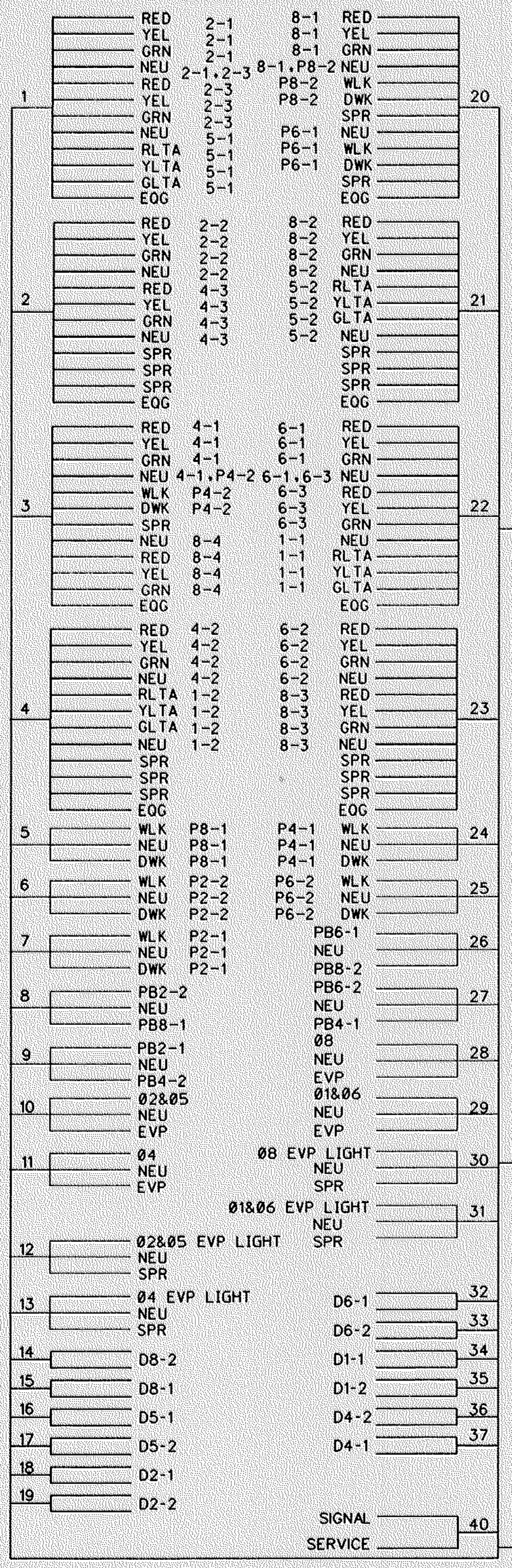
ORIT Schelen Mayerson & Associates, Inc.
 Engineers & Architects ■ Planners ■ Surveyors
 300 Park Place Center ■ 575 Wayzata Boulevard
 Minneapolis, MN 55416-1228 ■ 612-596-5775

INTERSECTION LAYOUT
 CSAH 1 (EAST RIVER ROAD)
 AND 89TH AVENUE NW
 S.P. 02-601-35
 COON RAPIDS, MINNESOTA

REVISION NO. DATE EXPLANATION
 02/28/95
 AS NOTED
 SCALE: PLAN BY: DESIGN BY: CHECKED BY: COMM NO.:
 DATE: 09/23/94
 RECORD COPY BY: DATE: 18327

PLAN NO. SH 29 OF 85

CONTROLLER CABINET



| CONDUCTOR COLOR CODING | |
|------------------------|------------------|
| R | BLK |
| O | WH 2-1/C#10 |
| BL | |
| WH | |
| R/BLK | R |
| O/BLK | WH 3/C#12 |
| BL/BLK | BLK |
| WH/BLK | |
| BLK | R OR O |
| BLK/WH | WH OR YEL 3/C#20 |
| G/BLK | BLK OR BL |
| G | |
| | BLK |
| | CLEAR 2/C#14 |
| 3-1/C#4 | WH |
| | BR, GR. |

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

ELECTRICAL ENG. CERT.
 I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Paul Suby
 PAUL SUBY
 DATE: 09/23/94 REG. NO. 18276

| | |
|----------------------|-------------------|
| REVISION NO. | EXPLANATION |
| 02/28/95 | WV/DOT COMMENTS |
| AS NOTED | DESIGN BY: CTR |
| SCALE: | PLAN BY: RBB |
| CHECKED BY: RBB | COMM. NO.: 511411 |
| RECORD COPY BY: DATE | |

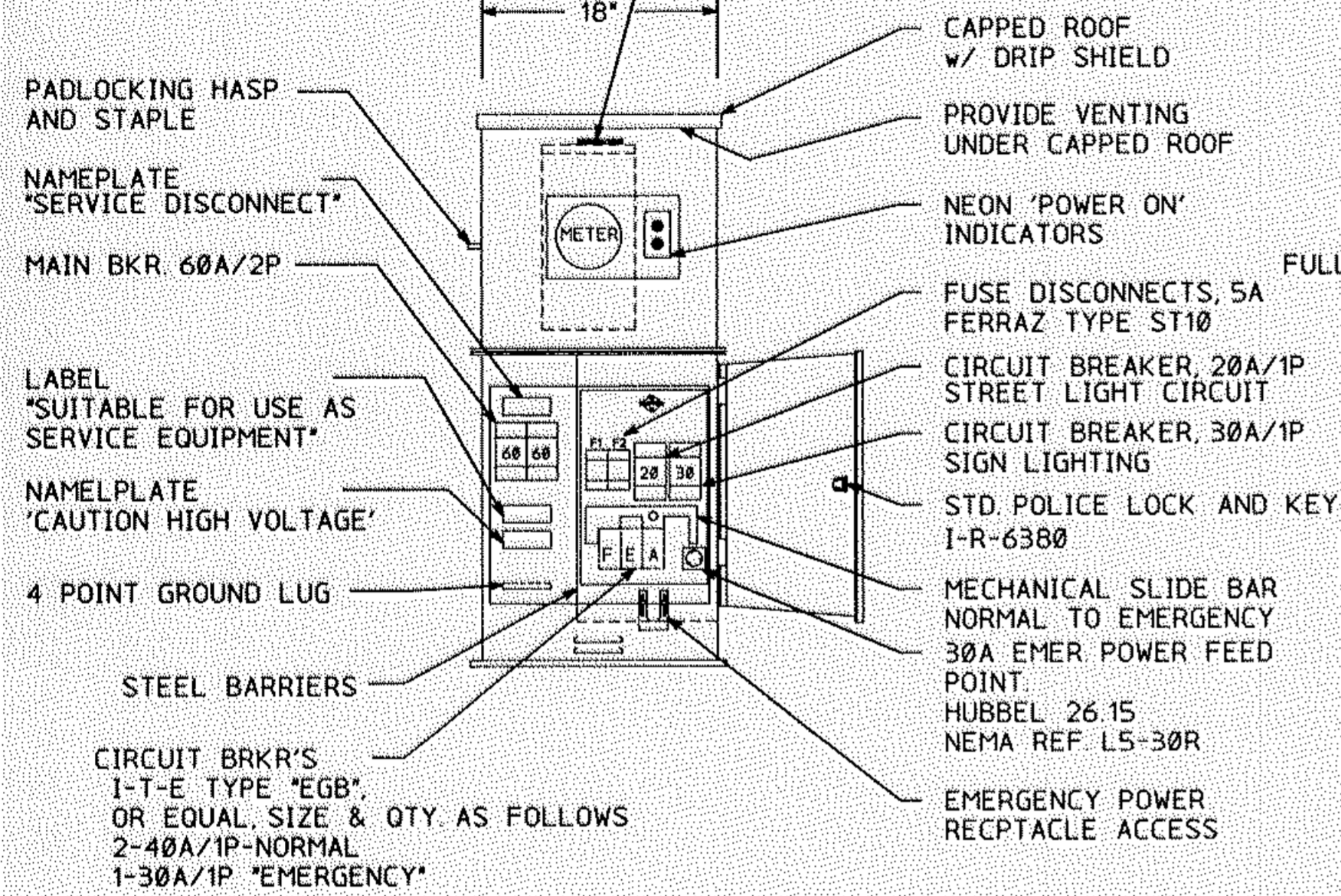
DATE: 09/23/94 REG. NO. 18276

CSM
 Orr Schelen Mayeron & Associates, Inc.
 Engineers & Architects • Planners • Surveyors
 300 Park Place Center • 5775 Wayzata Boulevard
 Minneapolis, MN 55416-1228 • 612-596-9775

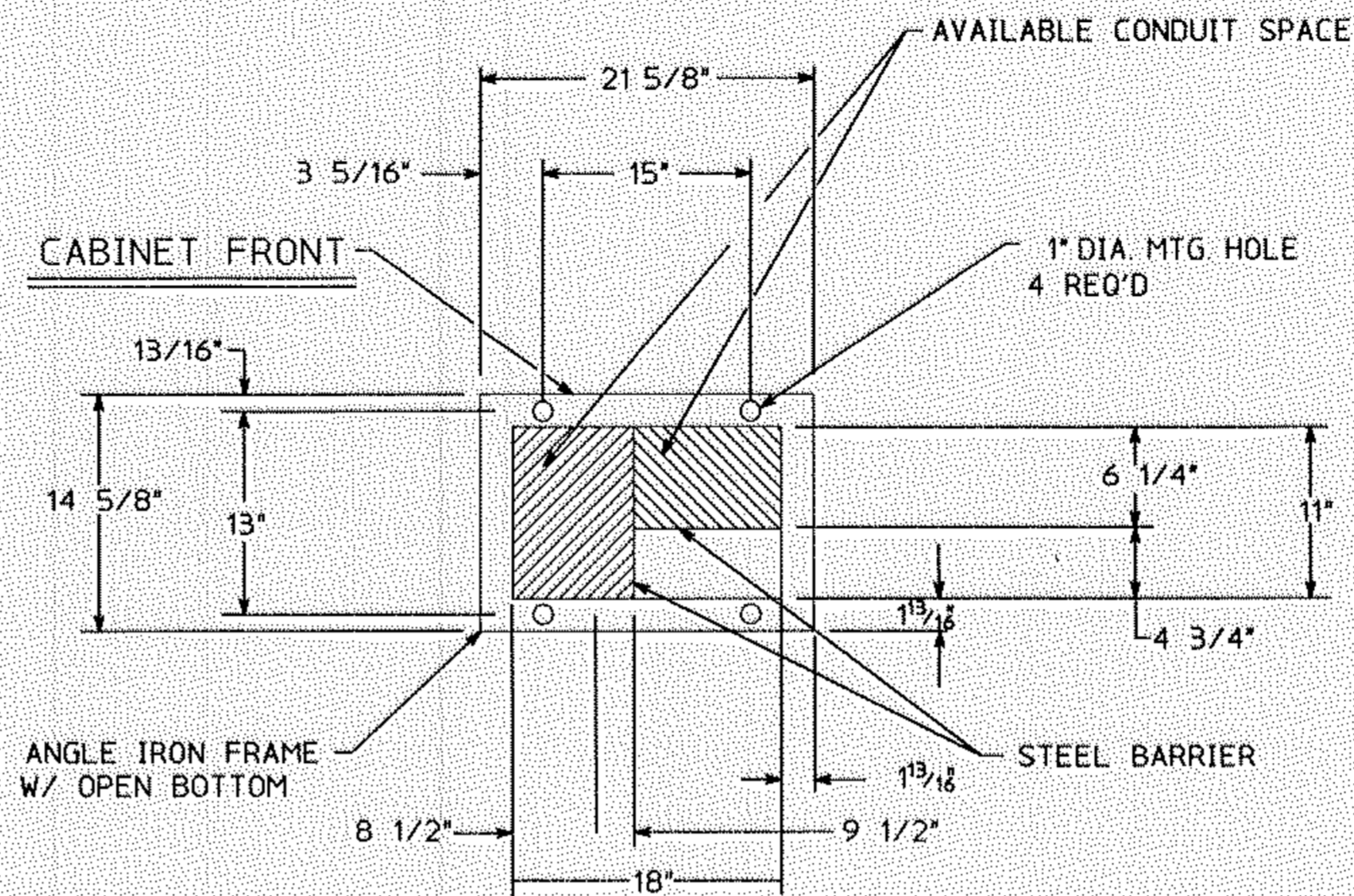
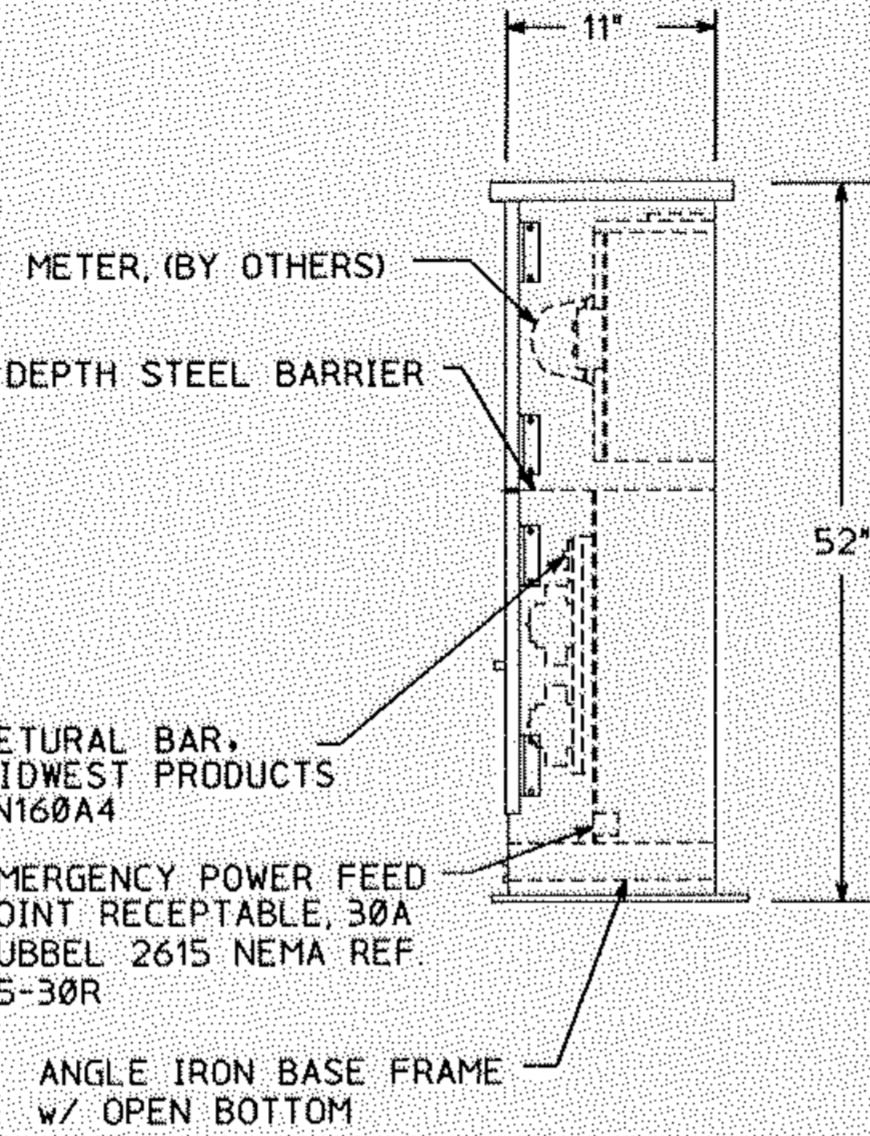
WIRING DIAGRAM
 CSAH 1 (EAST RIVER ROAD)
 AND 89TH AVENUE NW
 S.P. 02-601-35
 COON RAPIDS, MINNESOTA

PLAN NO. SH 30 OF 85

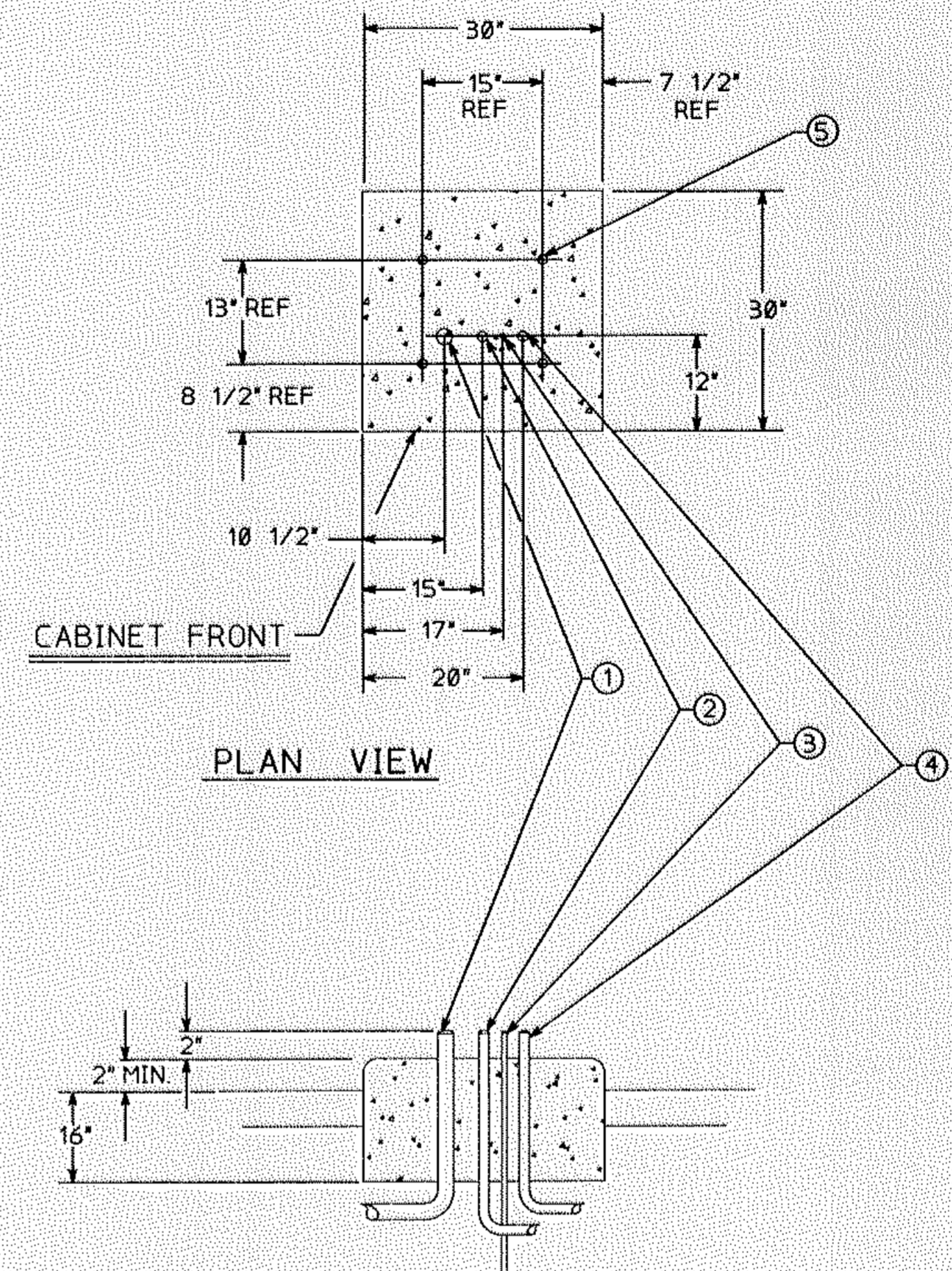
N.S.P. METER SOCKET, 5-TERMINAL
w/POSTIVE BY-PASS MECHANISM
MILBANK CAT. No. U-2272-RL



SIGNAL SERVICE CABINET



SERVICE CABINET FOUNDATION

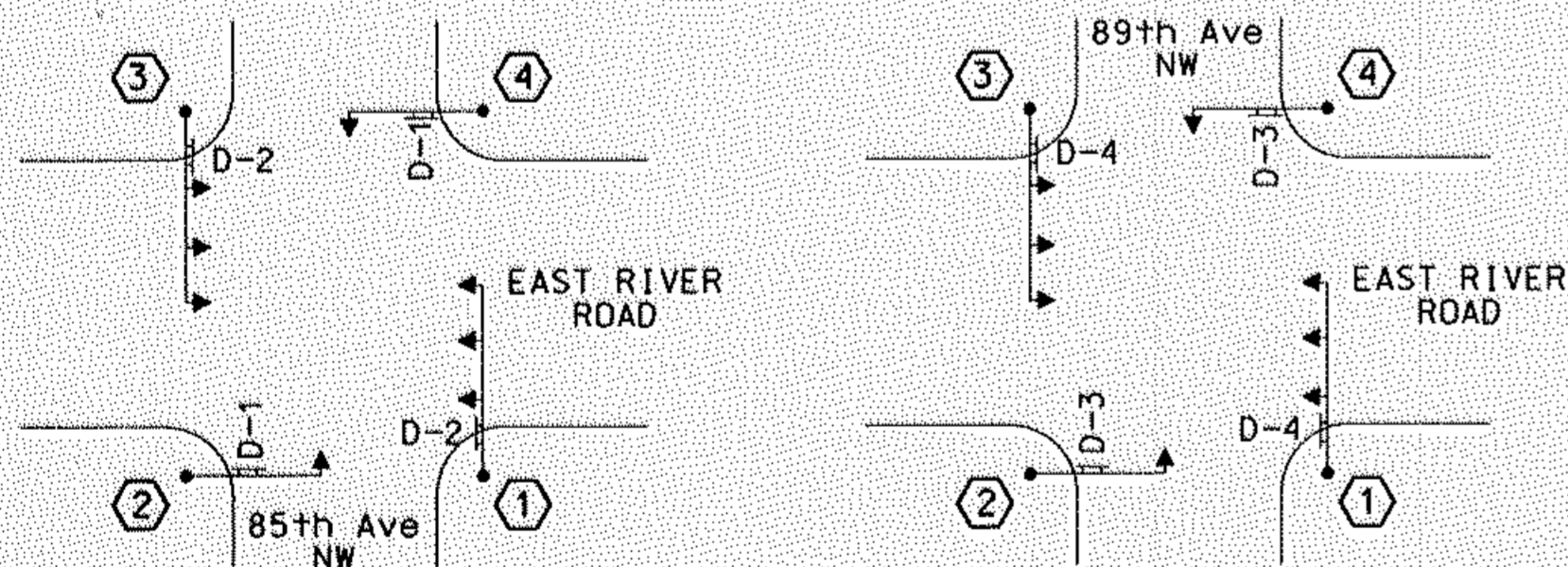


- ELEV. VIEW**
- ① 2" RSC FROM SOURCE OF POWER (VIA HANDHOLE 17 ON 85th AVE) (VIA HANDHOLE 16 ON 89th AVE)
 - ② 1 1/4" RSC TO CONTROLLER CABINET (VIA HANDHOLE 16 ON 85th AVE) (VIA HANDHOLE 15 ON 89th AVE)
 - ③ GROUND ROD
 - ④ 1 1/4" RSC TO HANDHOLE 1 (STREET LIGHTING/SIGNS)
 - ⑤ ANCHOR BOLT LOCATIONS (4 REQUIRED PER INTERSECTION)

CONSTRUCTION NOTES

ENCLOSURE SHALL BE FABRICATED FROM #12 GA ALL WELDED COLD ROLLED STEEL FOR OUTDOOR WEATHER PROOF SERVICE. DOORS TO BE GASKETED, ALL HINGES, PINS AND LOCKS TO BE OF NON CORRODING CONSTRUCTION. CABINET TO BE PRIMED INSIDE AND OUT WITH RUST INHIBITTING PRIMER FINISH PER MN/DOT #3527. SERVICE ENTRANCE EQUIPMENT MUST BE LABELED UL LISTED.

SIGN PANEL LAYOUTS

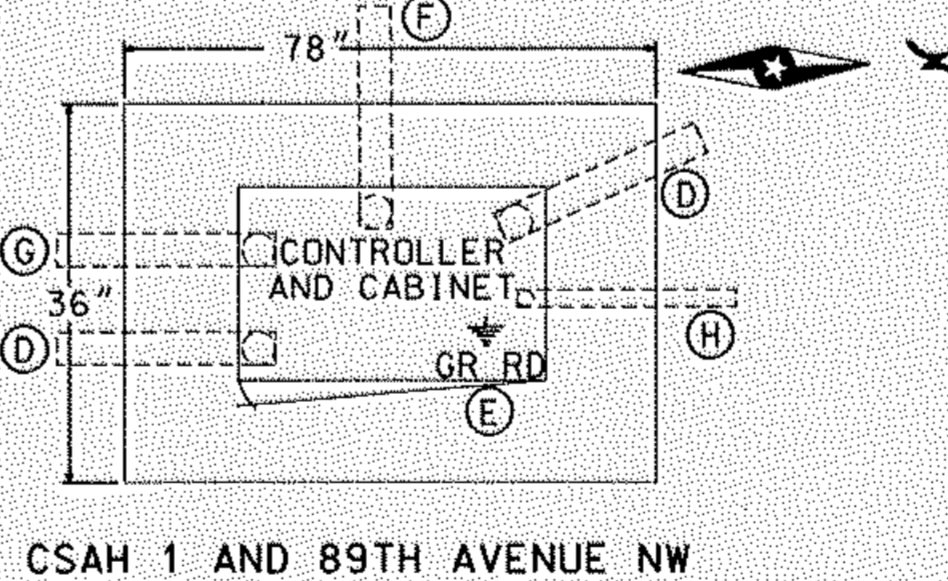
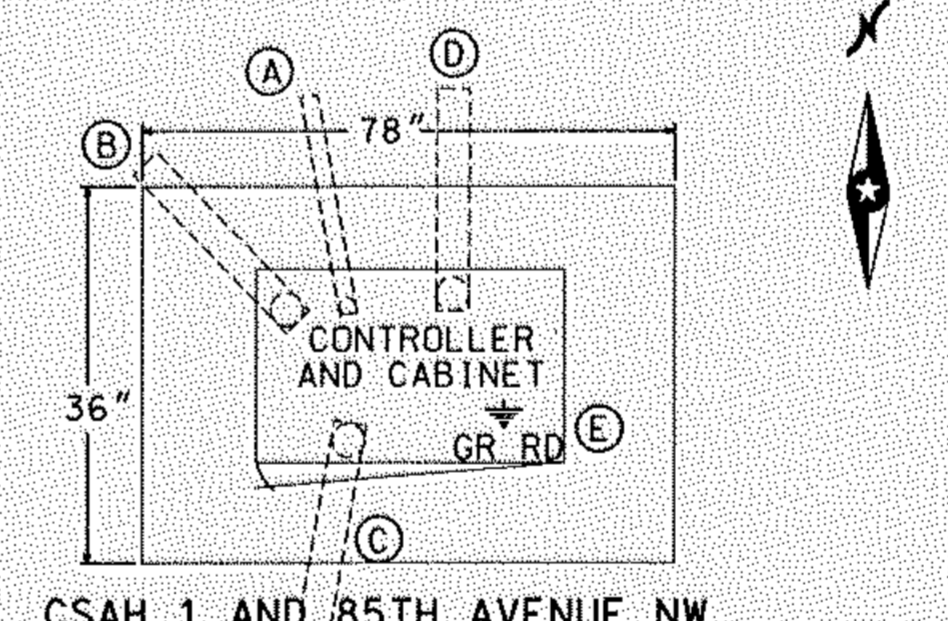
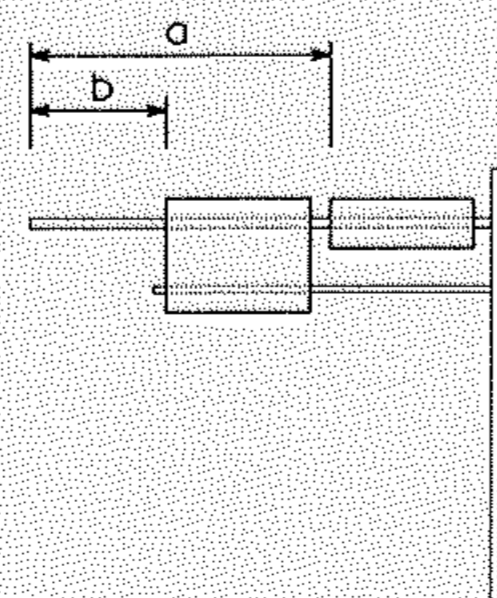
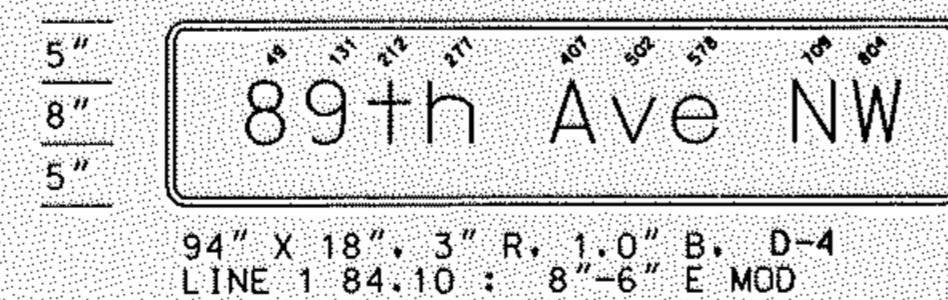
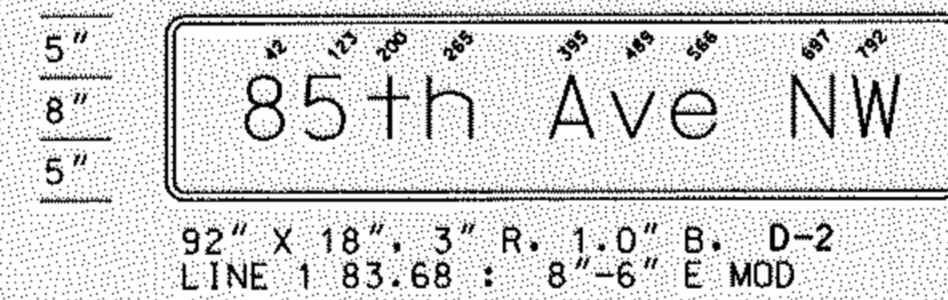
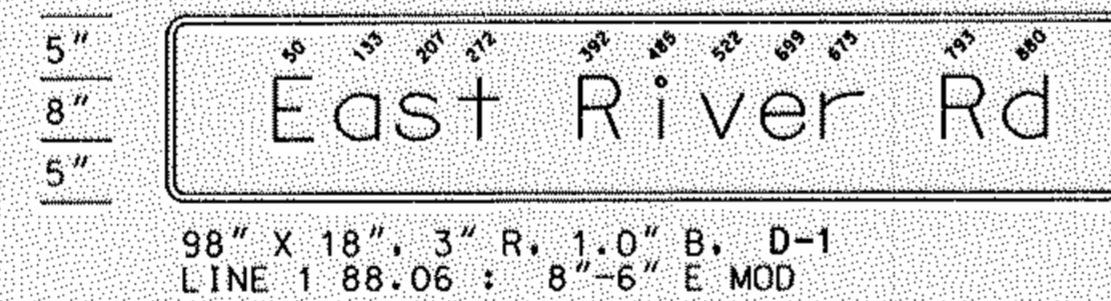


TYPE D SIGNS

| Sign Panel | Size | No. Req. | No. Posts per Sign | Post Spacing | Sq. Ft. per Sign | Pole No. | Location on Mastarm ① |
|------------|---------|----------|--------------------|--------------|------------------|----------|-----------------------|
| D-1 | 98"x18" | 2 | 3 | 45" | 12.25 | 2 | 6.0 |
| D-2 | 92"x18" | 2 | 3 | 45" | 11.50 | 4 | 9.0 |
| D-3 | 98"x18" | 2 | 3 | 45" | 12.25 | 1 | 34.0 |
| D-4 | 94"x18" | 2 | 3 | 45" | 11.75 | 3 | 34.0 |

GENERAL NOTES

1. Color - White legend and border on green background, fully reflectorized.
2. Corners extending beyond the border shall not be trimmed.
3. See Standard Signs Manual for arrow and overlay details.
4. For structural details, Type D Signs, see Standard Signs Manual, page 105A & B.
5. For type D Stringer and panel - Joint Detail, see Standard Signs Manual.



- CONCRETE FOUNDATION 36" X 78" X 18" DEEP
SEE INTERSECTION LAYOUT FOR CONDUIT & CABLE INFORMATION
- (A) 1 1/4" R.S.C. FOR SERVICE CONNECTION TO HH 16
 - (B) 4" R.S.C. TO HH 1
 - (C) 4" R.S.C. TO HH 2
 - (D) 3" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE INTERCONNECT).
 - (E) 5/8" DIA X 15' GROUND ROD
 - (F) 4" R.S.C. TO HH 1
 - (G) 4" R.S.C. TO HH 2
 - (H) 1 1/4" R.S.C. FOR SERVICE CONNECTION TO HH 15

CONTROLLER CABINET PAD LAYOUT
NO SCALE

ELECTRICAL ENG. CERT.

I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY REGISTERED ELECTRICAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Paul J. Schelen
PAUL J. SCHALEN
DATE: 09/23/94 REG. NO.: 18276

REVISION NO. DATE: 02/28/95
AS NOTED
SCALE: PLAN BY: CJK
CHECKED BY: RBB
RECORD COPY BY: DATE: 09/23/94 REG. NO.: 18276

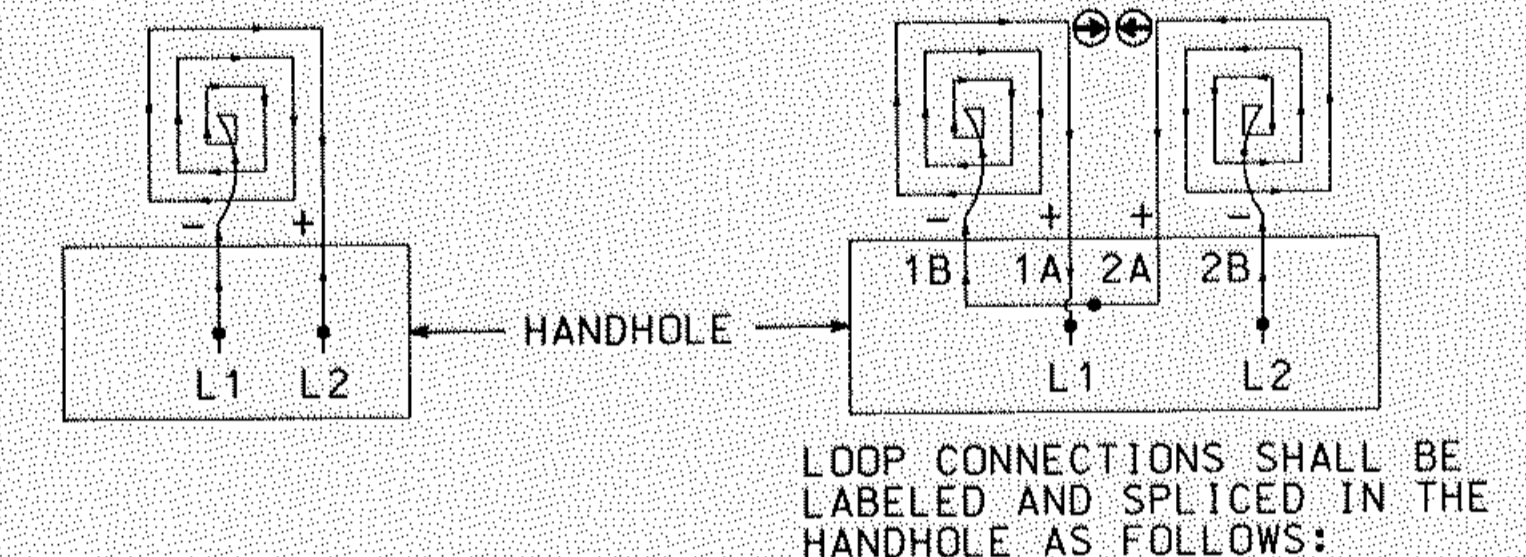
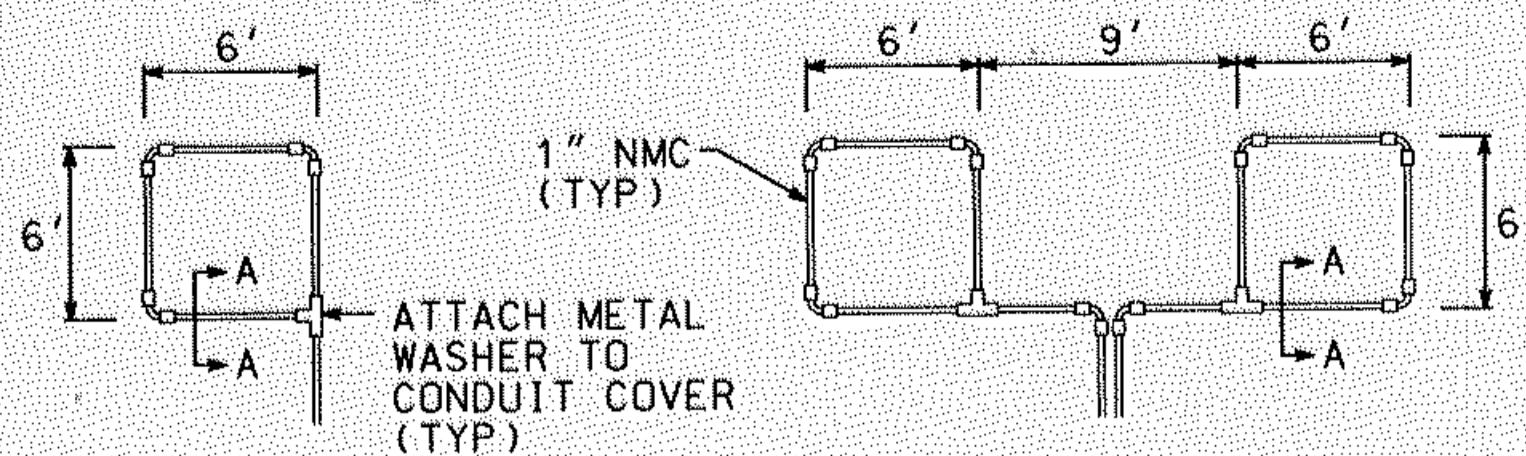
EXPLANATION
MIN/DOT COMMENTS

HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY REGISTERED ELECTRICAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
RONALD B. BAY
DATE: 09/23/94 REG. NO.: 18276

SIGNING AND EQUIPMENT DETAIL
CSAH 1 (EAST RIVER ROAD)
AT CR 192 (85TH AVE) & 89TH AVE
S.P. 02-601-35
COON RAPIDS, MINNESOTA

CSM
Schelen & Mayeron & Associates, Inc.
Engineers & Architects
300 Park Place Center
Minneapolis, MN 55416-1228
612-596-5775

PLAN NO. SH 31 OF 85



L1 TO 1A
1B TO 2A
2B TO L2

**LOOP DETECTOR
DETAIL 'A'**
(LOOP PHASING FOR
SINGLE CONNECTION)

**LOOP DETECTOR
DETAIL 'B'**
(LOOP PHASING FOR
SERIES CONNECTION)

LOOP DETECTOR WIRING

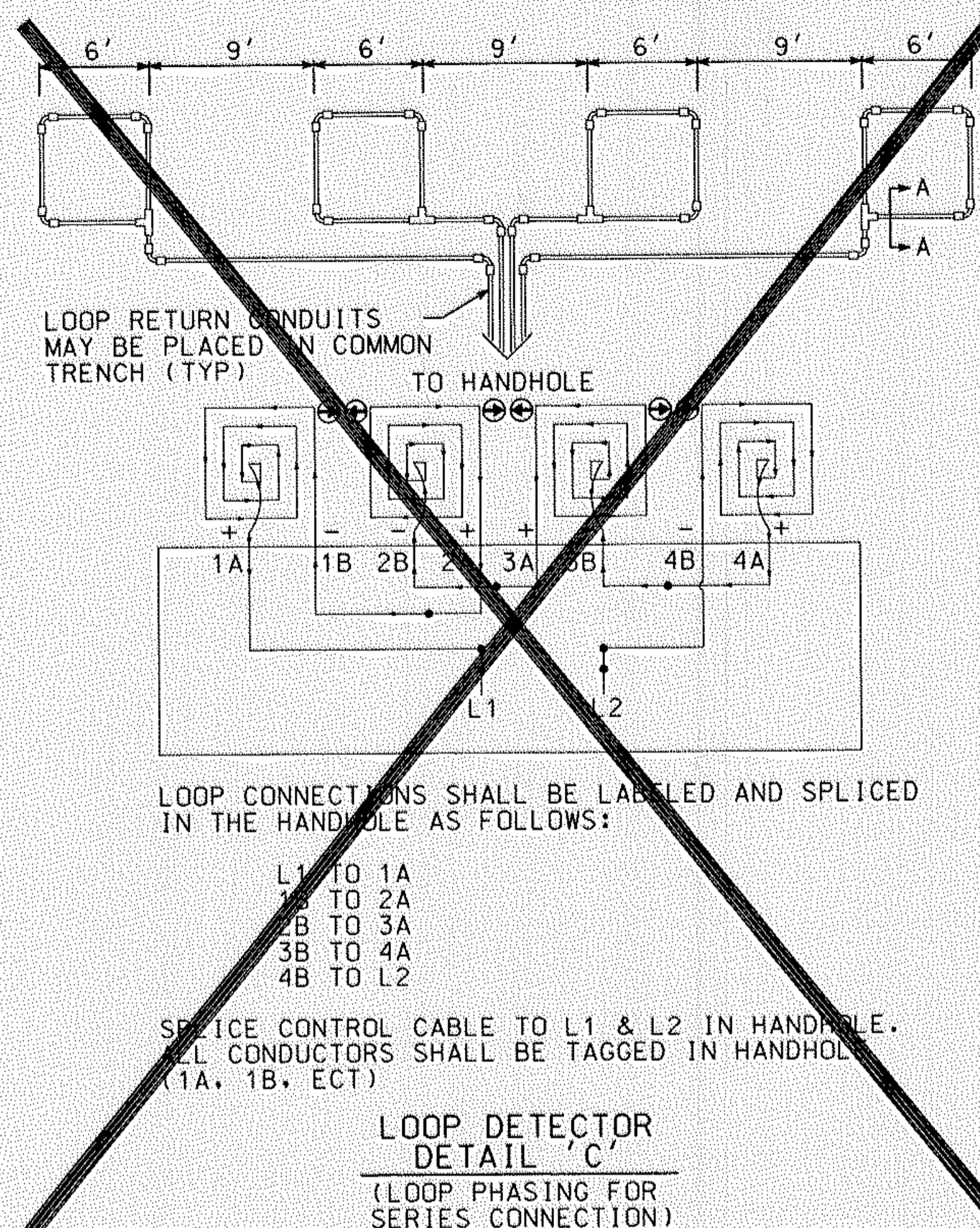
- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' x 6' THRU 6' x 14' SHALL HAVE (4) TURNS.
- 7) INSTALL A 1/2" CLOSED CELL BACKER ROD WITHIN EACH LOOP.

STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

| PLATE NO. | DESCRIPTION |
|-----------|--|
| * 8110 C | TRAFFIC SIGNAL BRACKETING - POLE MOUNTED |
| 8111 B | TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED |
| 8112 C | PEDESTAL FOUNDATION |
| 8113 C | MAGNETIC VEHICLE DETECTOR INSTALLATION |
| * 8115 C | PEDESTRIAN PUSH BUTTON INSTALLATION |
| * 8117 F | PRECAST CONCRETE HANDHOLE |
| 8118 C | SERVICE EQUIPMENT AND POLE |
| * 8119 C | GROUND MOUNTED CABINET FOUNDATION |
| * 8120 J | PA85 AND PA90 POLE FOUNDATION |
| * 8121 C | TRANSFORMER BASE WITH POLE BASE |
| 8122 C | PEDESTAL AND PEDESTAL BASE |
| * 8123 C | POLE AND MAST ARM |
| * 8124 D | SIGNAL HEAD MOUNTS |
| * 8126 E | PA100 POLE FOUNDATION |
| * 0005 A | SPECIFICATION REFERENCE TO STANDARD PLATES |
| 3124 B | METAL APRON CONNECTION |
| 3221 C | CORRUGATED STEEL PIPE COUPLING BAND |
| 7035 J | CONCRETE WALK AND CURB RETURNS AT ENTRANCES |
| 7100 F | CONCRETE CURB AND GUTTERS |
| 7036 D | PEDESTRIAN CURB RAMP |

* - APPLIES TO THIS PROJECT



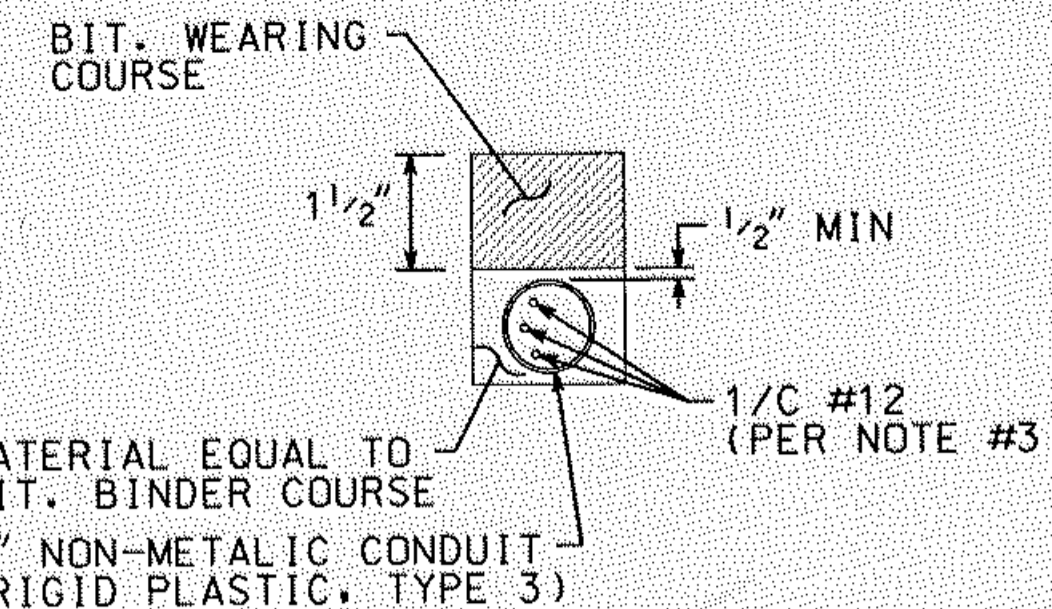
L1 TO 1A
1B TO 2A
2B TO 3A
3B TO 4A
4B TO L2

SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE.
ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE (1A, 1B, ECT)

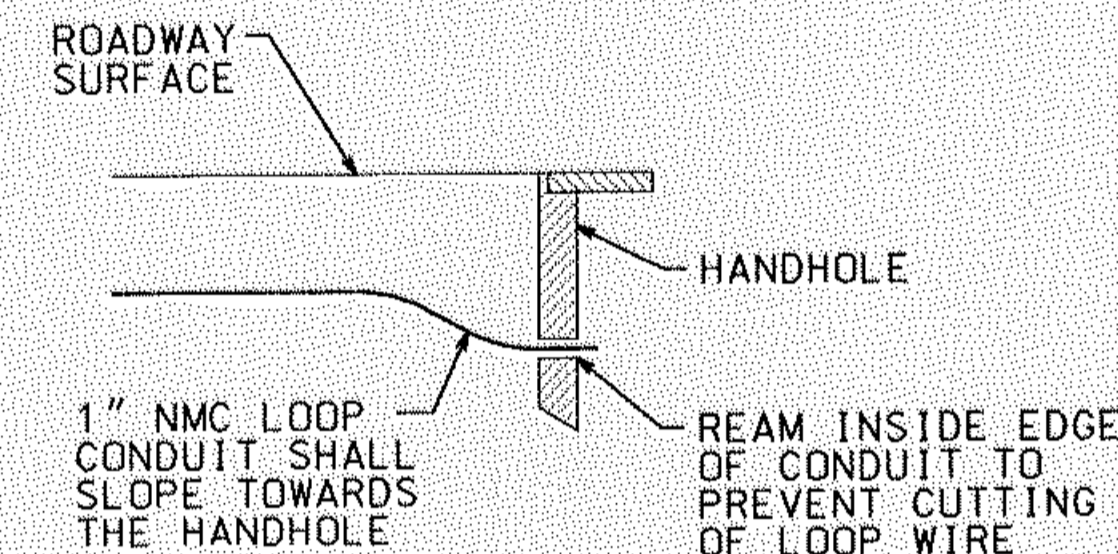
**LOOP DETECTOR
DETAIL 'C'**
(LOOP PHASING FOR
SERIES CONNECTION)

LEGEND OF SYMBOLS

| | |
|---|-----|
| CONTROLLER AND SERVICE EQUIP. NO's | (A) |
| SIGNAL BASE NO. | (1) |
| SIGNAL FACE NO. | (1) |
| LUMINAIRE NO. | (1) |
| CONTROLLER AND CABINET | (1) |
| CONTROLLER AND CABINET - IN PLACE | (1) |
| HANDHOLE | (1) |
| HANDHOLE - IN PLACE | (1) |
| RIGID STEEL CONDUIT (RSC) | (1) |
| RIGID STEEL CONDUIT (RSC) - IN PLACE | (1) |
| SIGNAL FACE WITH BACKGROUND SHIELD | (1) |
| SIGNAL FACE W/O BACKGROUND SHIELD | (1) |
| SIGNAL FACE - IN PLACE | (1) |
| PEDESTRIAN INDICATORS | (1) |
| PEDESTRIAN INDICATORS - IN PLACE | (1) |
| PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE | (1) |
| PEDESTRIAN PUSH BUTTON STATION | (1) |
| TRAFFIC SIGNAL PEDESTAL | (1) |
| TRAFFIC SIGNAL PEDESTAL - INPLACE | (1) |
| TRAFFIC SIGNAL POLE AND MAST ARM | (1) |
| TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE | (1) |
| STREET LIGHT POLE AND LUMINAIRE | (1) |
| STREET LIGHT POLE AND LUMINAIRE - IN PLACE | (1) |
| MAST ARM AND LUMINAIRE | (1) |
| MAST ARM AND LUMINAIRE - INPLACE | (1) |
| WOOD POLE | (1) |
| WOOD POLE - IN PLACE | (1) |
| SOURCE OF POWER | (1) |
| RAILROAD SIGNAL - IN PLACE | (1) |
| RIGHT OF WAY LINE | (1) |
| CENTERLINE | (1) |
| EDGE OF ROADWAY | (1) |
| SHOULDERLINE | (1) |
| CURB LINE | (1) |
| STOP BAR | (1) |



SECTION A-A



DRAINAGE DETAIL

ABBREVIATIONS

| | | | |
|----------|---------------------------------|----------|---|
| 3-1(EG) | SIGNAL HEAD PHASE "3" - NO. "1" | O | ORANGE |
| BL | BLUE | O/BLK | ORANGE WITH BLACK TRACER |
| BL/BLK | BLUE WITH BLACK TRACER | P1-(EG) | PEDESTRIAN INDICATION PHASE "2"-NO. "1" |
| BLK | BLACK | PB | PUSH BUTTON |
| BLK/WH | BLACK WITH WHITE TRACER | PB-2(EG) | PUSH BUTTON PHASE "2"-NO. "1" |
| BR. GR. | BARE GROUND | PEC | PHOTOELECTRIC CELL |
| CH. SW. | CHECK SWITCH | PED | PEDESTRIAN |
| CLR | CLEAR | R | RED |
| D2-1(EG) | DETECTOR PHASE "2" - NO. "1" | R&S | REMOVE AND SALVAGE |
| DWK | DON'T WALK | R/BLK | RED WITH BLACK TRACER |
| EQ | EQUIPMENT GROUND | RLTA | RED LEFT TURN ARROW |
| EVP | EMERGENCY VEHICLE PRE-EMPTION | RRTA | RED RIGHT TURN ARROW |
| F&I | FURNISH AND INSTALL | RSC | RIGID STEEL CONDUIT |
| FL | FLASH/FLASHING | SOP | SOURCE OF POWER |
| G | GREEN | SPR | SPARE |
| G/BLK | GREEN WITH BLACK TRACER | ST. LHT. | STREET LIGHT |
| GLTA | GREEN LEFT TURN ARROW | STA | STATION |
| GRN | GREEN | SW | SWITCH |
| GR. R. | GROUND ROD | SWD | SWITCHED |
| GRTA | GREEN RIGHT TURN ARROW | TDW | TELEPHONE DROP WIRE |
| GTHA | GREEN THRU ARROW | WH | WHITE |
| HH | HANDHOLE | WH/BLK | WHITE WITH BLACK TRACER |
| HPS | HIGH PRESSURE SODIUM | WLK | WALK |
| JB | JUNCTION BOX | YEL | YELLOW |
| LUM | LUMINAIRE | YLTA | YELLOW LEFT TURN ARROW |
| NEU | NEUTRAL | YRTA | YELLOW RIGHT TURN ARROW |
| NMC | NONMETALLIC CONDUIT | YTHA | YELLOW THRU ARROW |

S.A.P. 114-020-06
S.P. 02-601-35

| REVISION NO. | AS NOTED | DESIGN BY: | DATE |
|---|---|-----------------------|---------|
| 02/28/95 <td>PLAN BY: <td>CTR <td>5/14/11 </td></td></td> | PLAN BY: <td>CTR <td>5/14/11 </td></td> | CTR <td>5/14/11 </td> | 5/14/11 |
| | CHECKED BY: <td>COMAND. <td></td> </td> | COMAND. <td></td> | |
| | RECORDED BY: <td>RBB <td></td> </td> | RBB <td></td> | |
| | RECORD COPY BY: <td> <td></td> </td> | <td></td> | |

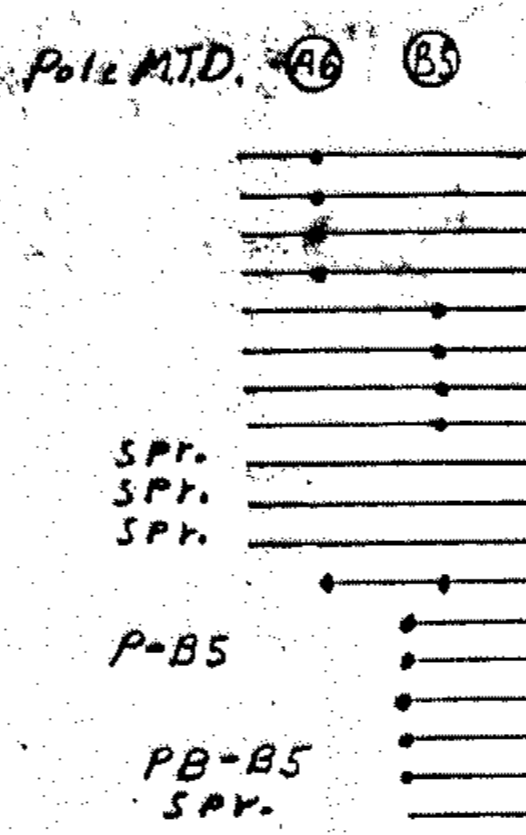
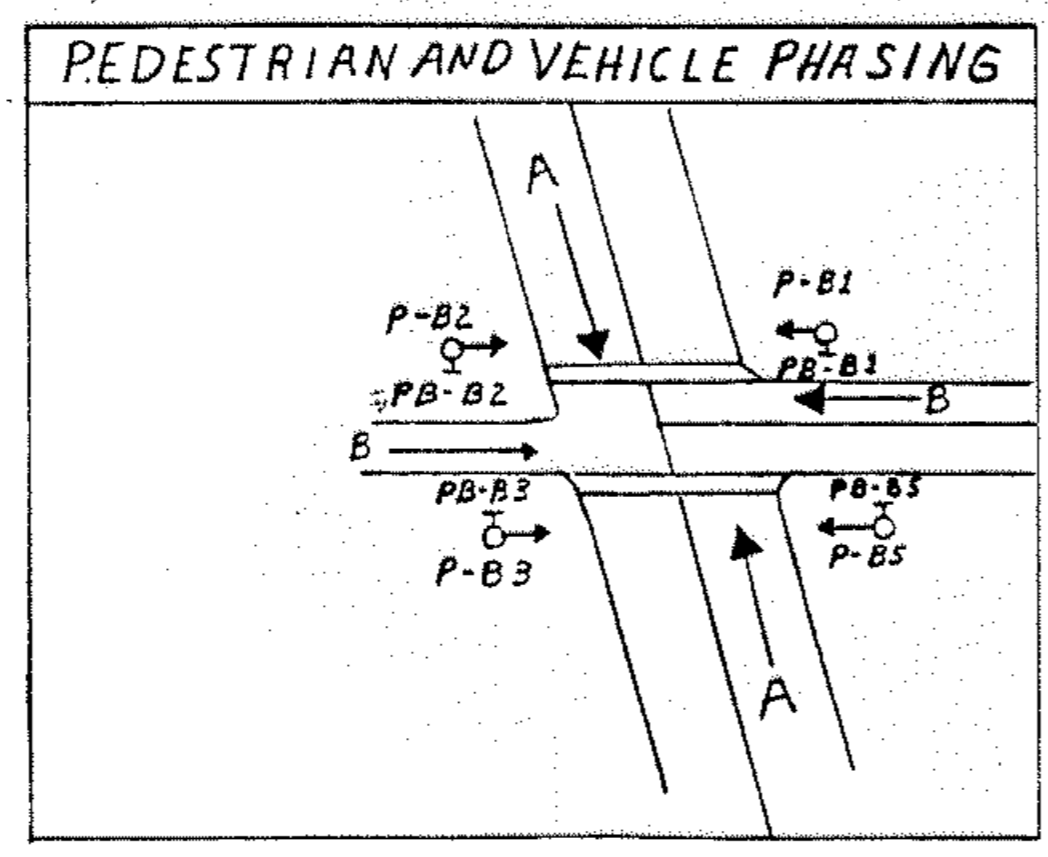
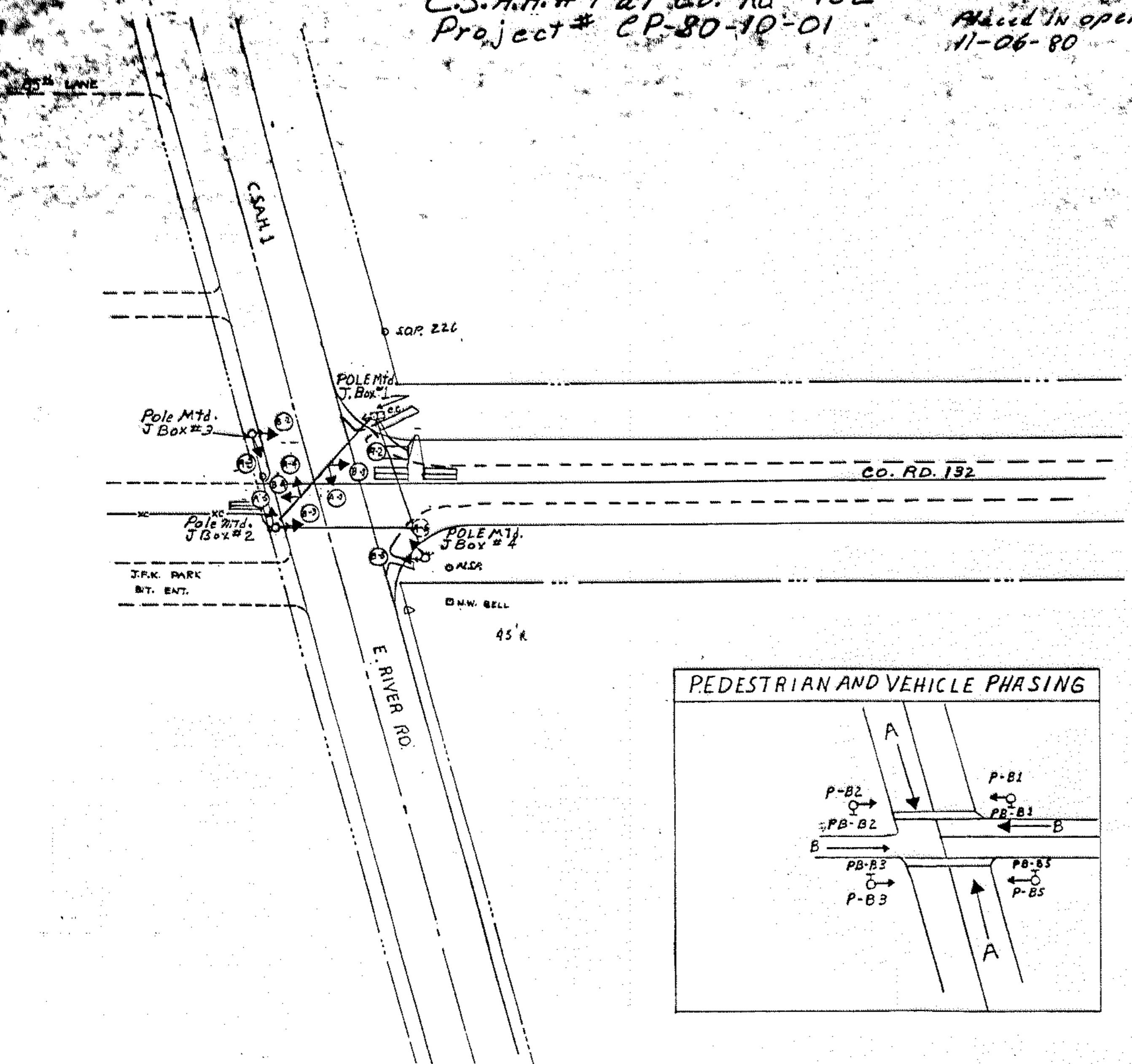
MISCELLANEOUS DETAILS
CSAH 1 (EAST RIVER ROAD)
AT CR 132 (85TH AVE) & 89TH AVE
S.P. 02-601-35
COON RAPIDS, MINNESOTA

OSM
Ort Schelen
Mayeron &
Associates, Inc.
Engineers & Architects • Planners • Surveyors
300 Park Place Center • 5775 Weyzata Boulevard
Minneapolis, MN 55416-1228 • 612-596-5775

PLAN NO.
SH 32 OF 85

Temporary Signal
 C.S.A.H.#1 at Co. Rd #132
 Project# CP-80-10-01

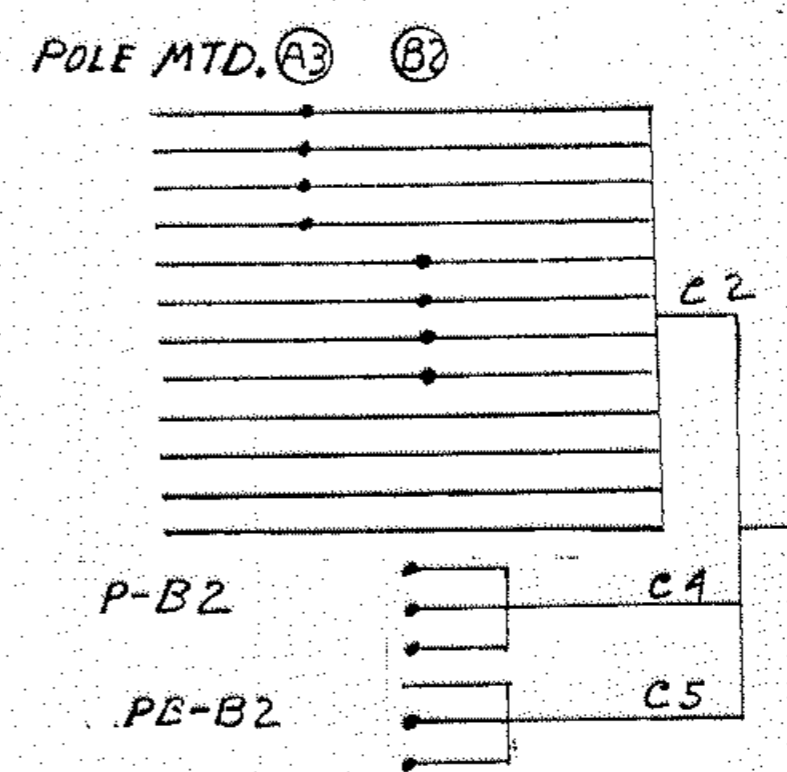
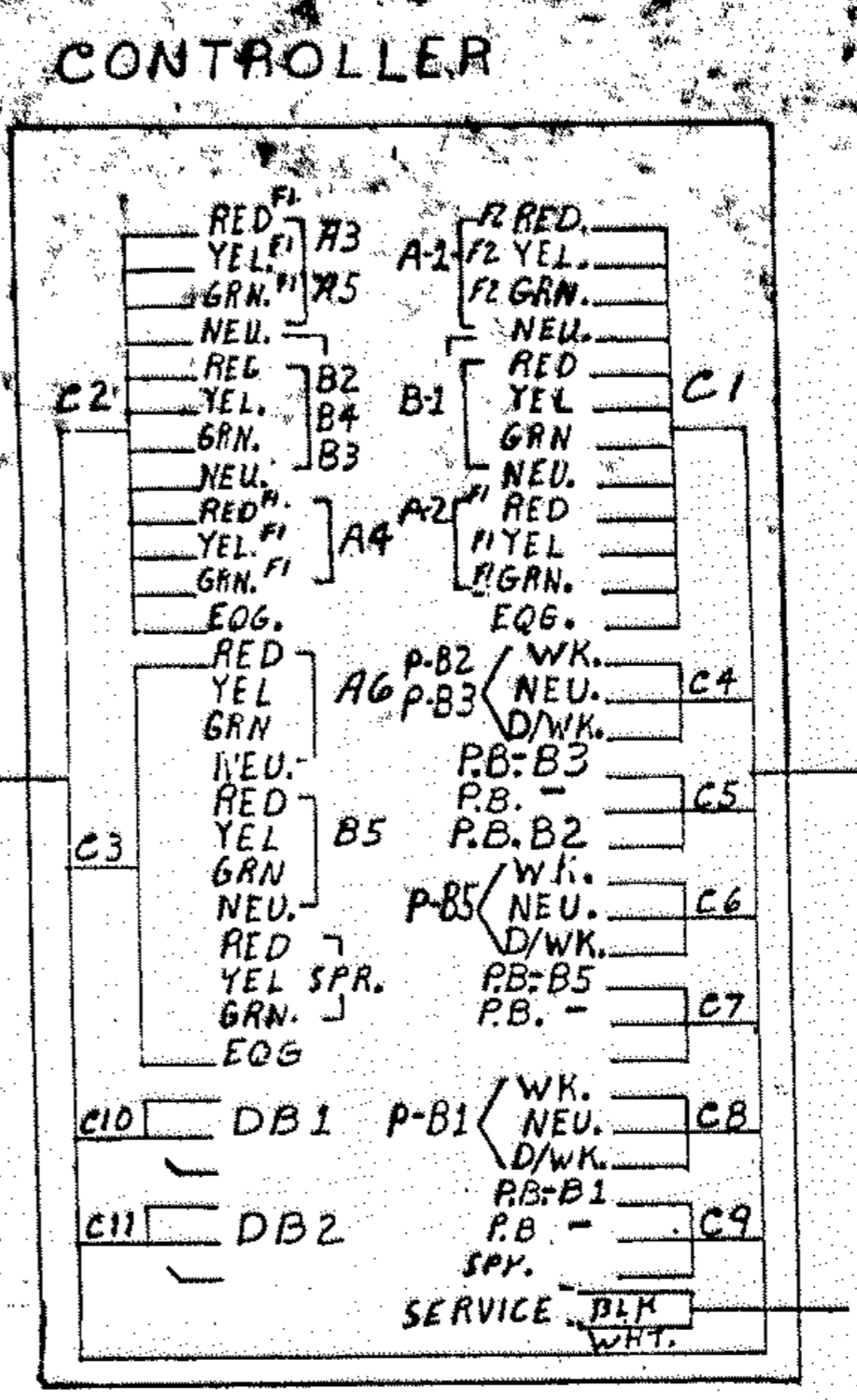
Placed in operation
 11-06-80



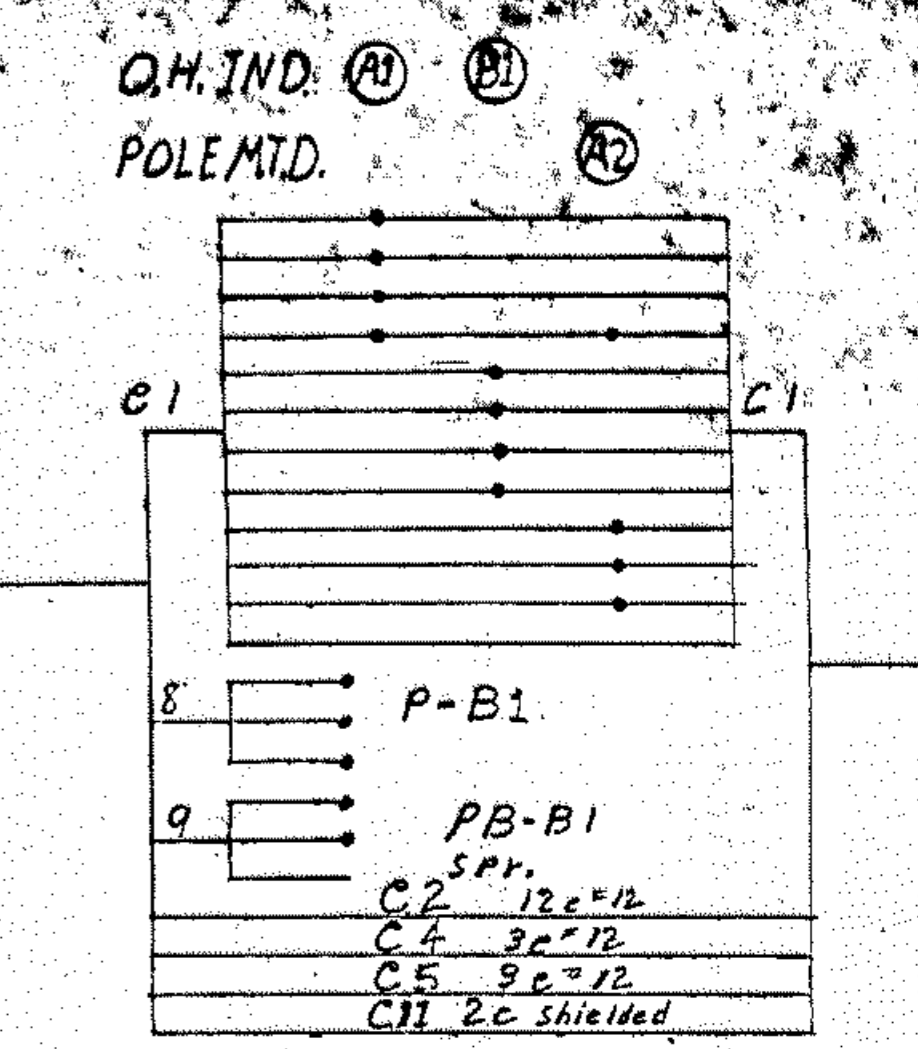
JUNCTION BOX #4
 POLE MTD. SE. Corner

| CONDUCTOR COLOR CODE | |
|----------------------|--------------------------|
| R | RED |
| O | ORANGE |
| BL | BLUE |
| WH | WHITE |
| R/BLK | RED WITH BLACK TRACER |
| O/BLK | ORANGE WITH BLACK TRACER |
| BL/BLK | BLUE WITH BLACK TRACER |
| WH/BLK | WHITE WITH BLACK TRACER |
| BLK | BLACK |
| BLK/WH | BLACK WITH WHITE TRACER |
| G/BLK | GREEN WITH BLACK TRACER |
| G | GREEN |

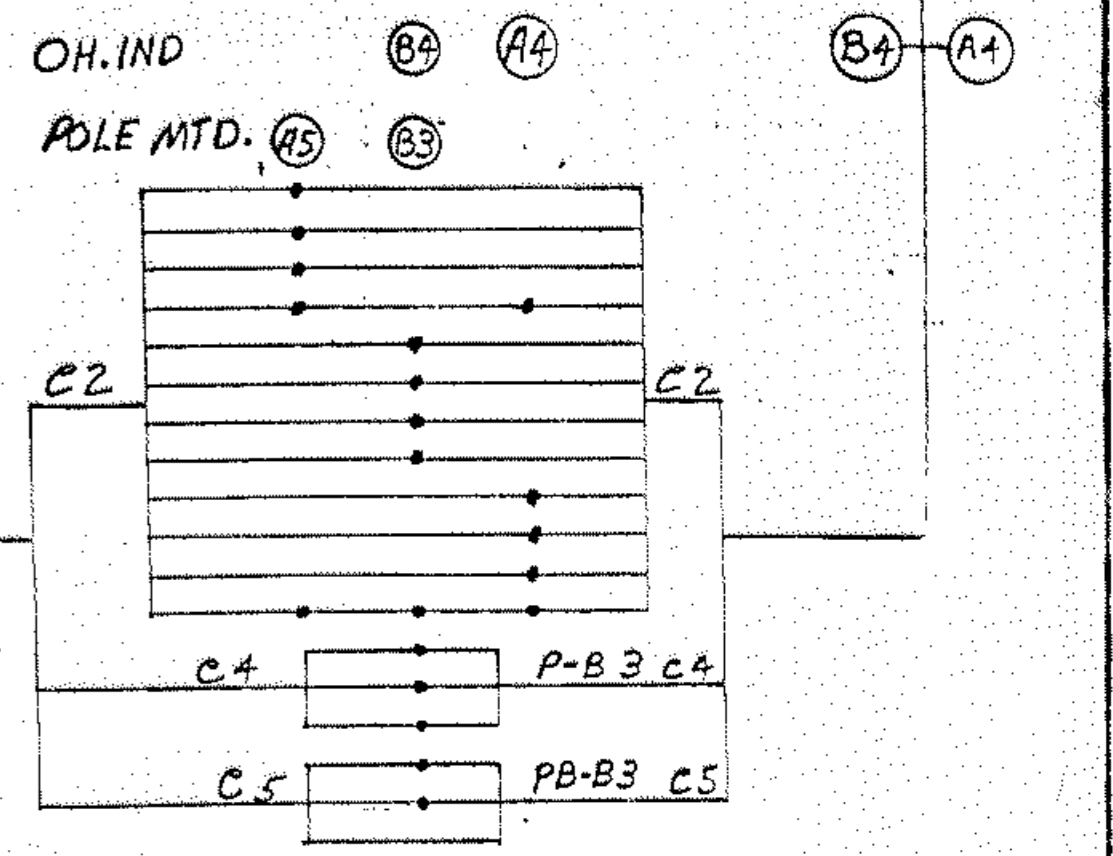
ARRANGE WIRES ON TERMINAL BLOCKS PER. ABOVE DIAGRAM.



JUNCTION BOX #3
 N.W. CORNER



JUNCTION BOX #1
 POLE MTD. N.E. CORNER



JUNCTION BOX #2
 POLE MTD. S.W. CORNER

CP-80-10-01 9-2-80
 TEMPORARY SIGNAL WIRING DIAGRAM
 CSAH #1 (BRR) & CO. RD. 132

Temporary Signal System CP-80-10-01
 C.S.A.H.#1 at Co. Rd #132
 CONTROLLER NOTE'S

1. Operation during light Traffic with T.C. Switches off. Q B Detector N.C. Contacts Call & Extend Phase A when a phase B actuation is not present. Q B actuation disconnects Q A Detector and Q A Passage Times a delay Period before Q B is served. Phase B is non locking detection. Phase A Recall is ON.

2. Moderate to heavy Traffic operation: T C II Ties Q A detection down. Phase A Max sets delay for Phase B Vehicles. Phase A Initial + MAX I sets Phase A green Time.
3. T C I can be used to call MAX II Controller setting.
4. T C III calls Intersection Flash. A Phase Flashes Yellow on CSAH #1. B Phase Flashes Red For Co Rd 132.

FOR INFORMATION ONLY
 SALVAGE SIGNAL SYSTEM "A"

| REVISIONS | DATE | BY |
|-----------|------|----|
| | | |

NOTES:

- ALL EQUIPMENT OF THE EXISTING SIGNAL SYSTEM IS INPLACE AND SHALL REMAIN INPLACE UNLESS DENOTED WITH A * (*=WORK TO BE DONE)
- ALL MULTIPLE CONDUCTOR CONTROL CABLE USED INPLACE ON THIS PROJECT SHALL BE IP/C/E TYPE CT-B
- LOOP DETECTORS D 4 AND D 5 ARE NEW FURNISHED AND INSTALLED BY CONTRACTOR LOOP DETECTOR D-4 SHALL BE A 6'x6' LOOP LOCATED AS SHOWN LOOP DETECTOR D-5 SHALL BE A 6' x 12' AND A 6' x 8' LOOP DETECTOR, LOCATED AS SHOWN
- CONTRACTOR SHALL EXTEND ALL INPLACE CONDUIT FROM OLD HANDHOLE 2 INTO NEW HANDHOLE 2
- SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR THE LOCATION OF UTILITIES
- ALL NEW PEDESTRIAN INDICATIONS SHALL BE 9"x9"
- NEW SIGNAL FACES 3B 4 AND 4A SHALL HAVE BACKGROUND SHIELDS
- INPLACE GUARD POSTS SURROUNDING POLES 3 AND 4 AND THE CONTROLLER CABINET SHALL BE REMOVED AND DISPOSED OF.

- 1 PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
* ONE WAY SIGNAL-REVISE TO TYPE 2C
* TWO-PEDESTRIAN PUSH BUTTONS AND SIGNS
* 3-METAL GUARD POSTS
EXTEND INTO HH 6
3" RMC
1-12/c#12
*1-12/c#12
*2-3/c#12

- 4 *SALVAGE TWO-WAY OVERHEAD SIGNAL
*20' MAST ARM-REMOVE
*REMOVE FOUNDATION
*P80 POLE FOUNDATION-FURNISH AND INSTALL
*REINSTALL POLE ON NEW FOUNDATION
*INSTALL 25' MAST ARM -FURNISHED BY OTHERS
*TWO WAY SIGNAL-OVERHEAD
*TYPE 20A-REVISE TO TYPE 20C-POLE MOUNTED 270
*2-PEDESTRIAN PUSH BUTTONS AND SIGNS
*4-METAL GUARD POSTS-SEE NOTE 8
*EXTEND INTO H.H.1
3" RMC
3-12/c#12
*2-12/c#12
*2-3/c#12

- 2 20' MAST ARM AND POLE
ONE WAY SIGNAL OVERHEAD
*TYPE 10B REVISE TO TYPE 20C
(POLE MOUNTED 270°)
ONE PEDESTRIAN PUSH BUTTON AND SIGN INPLACE
*ONE PEDESTRIAN PUSH BUTTON AND SIGN
4 METAL GUARD POSTS
EXTEND INTO HH 4
3" RMC
2-12 c#12
2-3 c#12
*2-12 c#12
*2-3 c#12

- 3 *SALVAGE ONE WAY SIGNAL
*PEDESTAL POLE AND BASE REMOVE
*REMOVE PEDESTAL FOUNDATION
*P80 POLE FOUNDATION-FURNISH AND INSTALL
*INSTALL P80 A 25' -FURNISHED BY OTHERS
*ONE WAY SIGNAL OVERHEAD-FURNISH AND INSTALL
*REVISE ONE WAY SIGNAL (PEDESTAL MOUNTED) TO TYPE 10C POLE MOUNTED 270
*ONE PEDESTRIAN PUSH BUTTON AND SIGN REMOVE AND REINSTALL ON NEW POLE
*ONE PEDESTRIAN PUSH BUTTON AND SIGN FURNISH AND INSTALL
*3-METAL GUARD POSTS-SEE NOTE 8
*EXTEND INTO HH 2
3" RMC
1-12 c#12
4-3 c#12
*1-12 c#12

- A * CONTROLLER AND CABINET-REMOVE AND SALVAGE
* INSTALL CONTROLLER AND CABINET-FURNISHED BY OTHERS
* CABINET FOUNDATION
* 4-METAL GUARD POSTS-SEE NOTE 8
* EXTEND INTO HH 1
* 2 3" RMC
3-12 c#12
5-3 c#12
2-1 c#6 TYPE RHW OR THW
* 2-12 c#12
* 2-3 c#12
* 2-2 c#14
* BETWEEN HH 1 AND RELOCATED WOOD POLE
* 1 1/4" RMC
2-1 c#6 TYPE RHW OR THW

LEGEND OF SYMBOLS

| | |
|----------|--|
| 3 | SIGNAL POLE NUMBER |
| 3A | SIGNAL FACE NUMBER |
| [Symbol] | CONTROLLER |
| [Symbol] | PEDESTAL (■ = NEW FOUNDATION) |
| [Symbol] | HANDHOLE (PULLBOX) (■ = NEW HANDHOLE) |
| [Symbol] | RIGID METALLIC CONDUIT - INPLACE |
| [Symbol] | RIGID METALLIC CONDUIT - F & I |
| [Symbol] | MAST ARM AND POLE (● NEW FOUNDATION) |
| [Symbol] | SIGNAL FACE (→ = F&I) |
| [Symbol] | SIGNAL FACE WITH BACKGROUND SHIELD |
| [Symbol] | SOURCE OF POWER (S.O.P.) |
| [Symbol] | METALLIC DETECTOR IN 3" N.M.C.-INPLACE |
| [Symbol] | PEDESTRIAN INDICATION (→ = F&I) |

DETECTORS

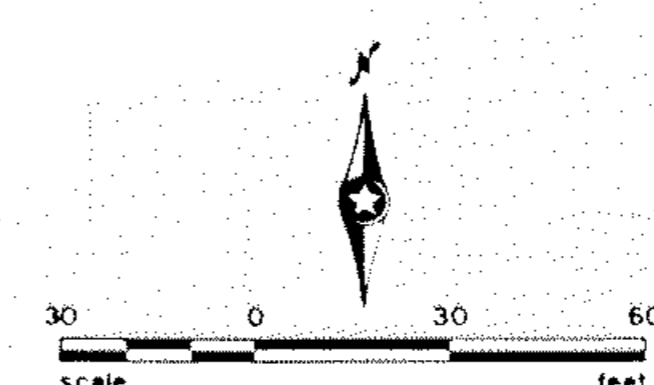
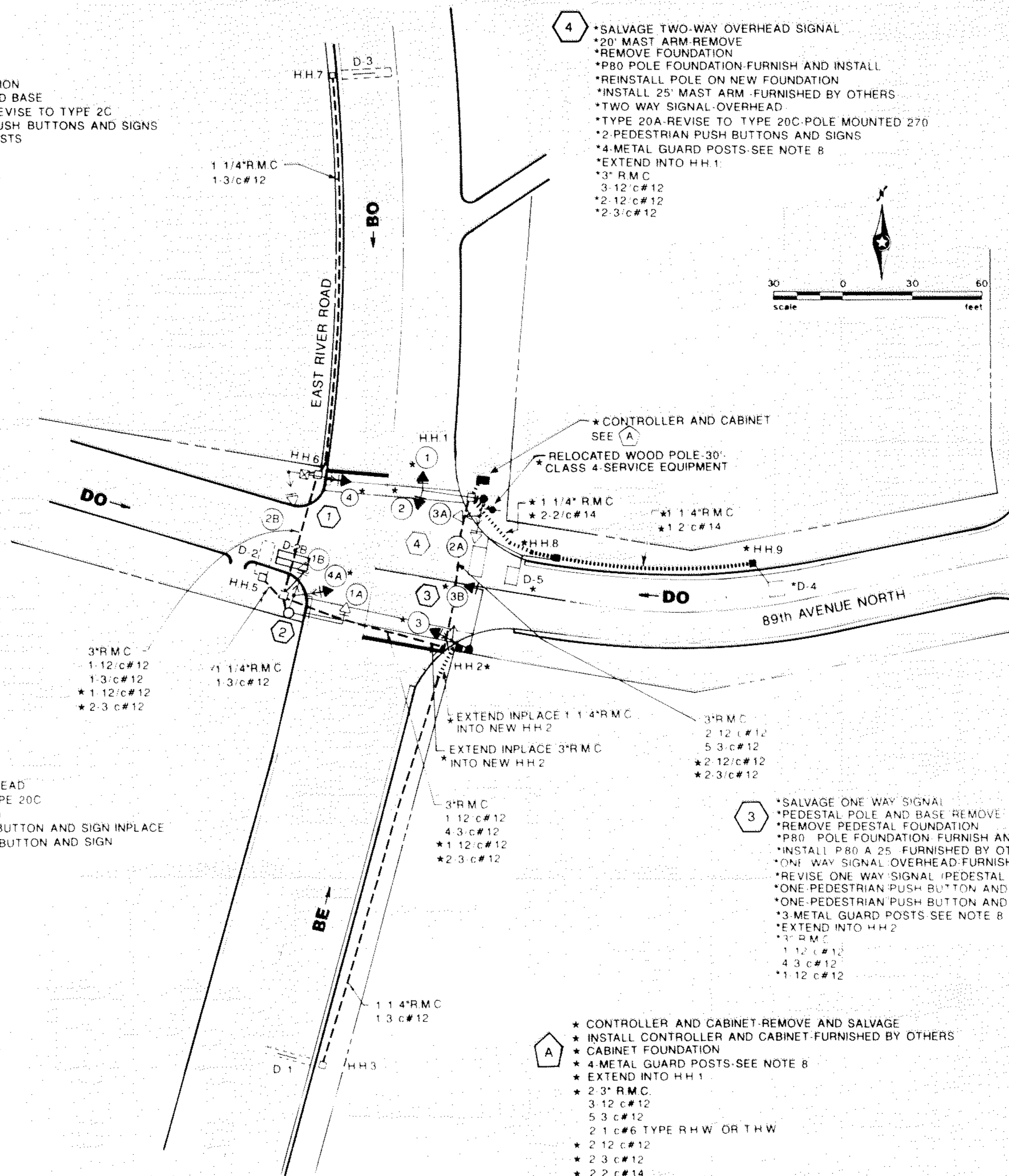
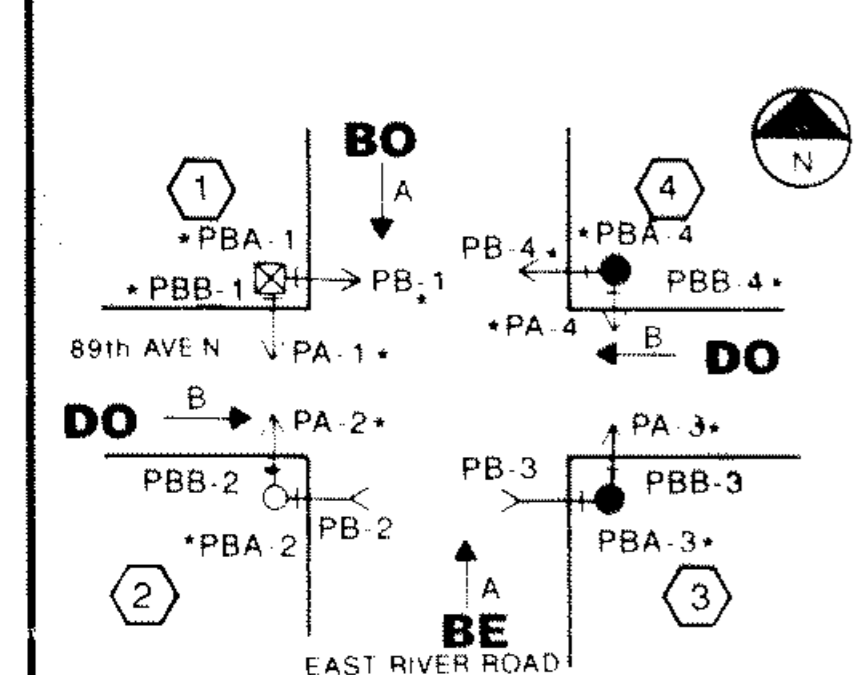
| NUMBER | PHASE | TYPE SIZE | FUNCTION | * |
|--------|-------|-----------|---------------------|-----|
| D-3 | BO | MAG | CALL & EXTEND | 165 |
| D-1 | BE | MAG | CALL & EXTEND | 175 |
| D-4 | DO | 6 x 6 | EXTEND ONLY | 115 |
| D-2B | DO | QUAD | DELAY CALL, IMD EXT | 0 |
| D-5 | DO | 6 x 6 | DELAY CALL, IMD EXT | 0 |

* = DISTANCE TO STOP LINE

SIGNAL INDICATIONS

| FACE | PHASE | FLASH | TYPE AND SIZE IN INCHES | | |
|------|-------|-------|-------------------------|-----|-----|
| | | | R | Y | G |
| 1 | A | Y | 12 | 12 | 12 |
| 1A | A | Y | 12 | 12 | 12 |
| 1B | A | Y | 12 | 12 | 12 |
| 2 | A | Y | 12 | 12 | 12 |
| 2A | A | Y | 12 | 12 | 12 |
| 2B | A | Y | 12 | 12 | 12 |
| 3 | B | R | 12 | 12 | 12 |
| 3A | B | R | 12 | 12 | 12 |
| * 3B | * B | * R | *12 | *12 | *12 |
| * 4 | * B | * R | *12 | *12 | *12 |
| * 4A | * B | * R | *12 | *12 | *12 |

CONTROLLER AND PEDESTRIAN PHASING



FOR INFORMATION ONLY

SALVAGE SIGNAL SYSTEM "B"

STANDARD PLATES

| PLATE NO. | DESCRIPTION |
|-----------|--|
| * 8110 C | TRAFFIC SIGNAL BRACKETING - POLE MOUNTED |
| * 8111 B | TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED |
| 8112 C | PEDESTAL FOUNDATION |
| 8113 C | MAGNETIC VEHICLE DETECTOR INSTALLATION |
| * 8115 C | PEDESTRIAN PUSH BUTTON INSTALLATION |
| * 8117 F | PRECAST CONCRETE HANDHOLE |
| * 8118 C | SERVICE EQUIPMENT AND POLE |
| * 8119 C | GROUND MOUNTED CABINET FOUNDATION |
| * 8120 H | P-80 AND P-90 POLE FOUNDATION |
| 8121 B | TRANSFORMER BASE WITH POLE BASE PLATE |
| 8122 C | PEDESTAL AND PEDESTAL BASE |
| * 8123 B | POLE AND MAST ARM |
| * 8124 D | SIGNAL HEAD MOUNTS |
| * 8126 C | P-100 POLE FOUNDATION |
| * 8130 D | SAW CUT LOOP DETECTORS |

* THESE STANDARD PLATES APPLY TO THIS PLAN

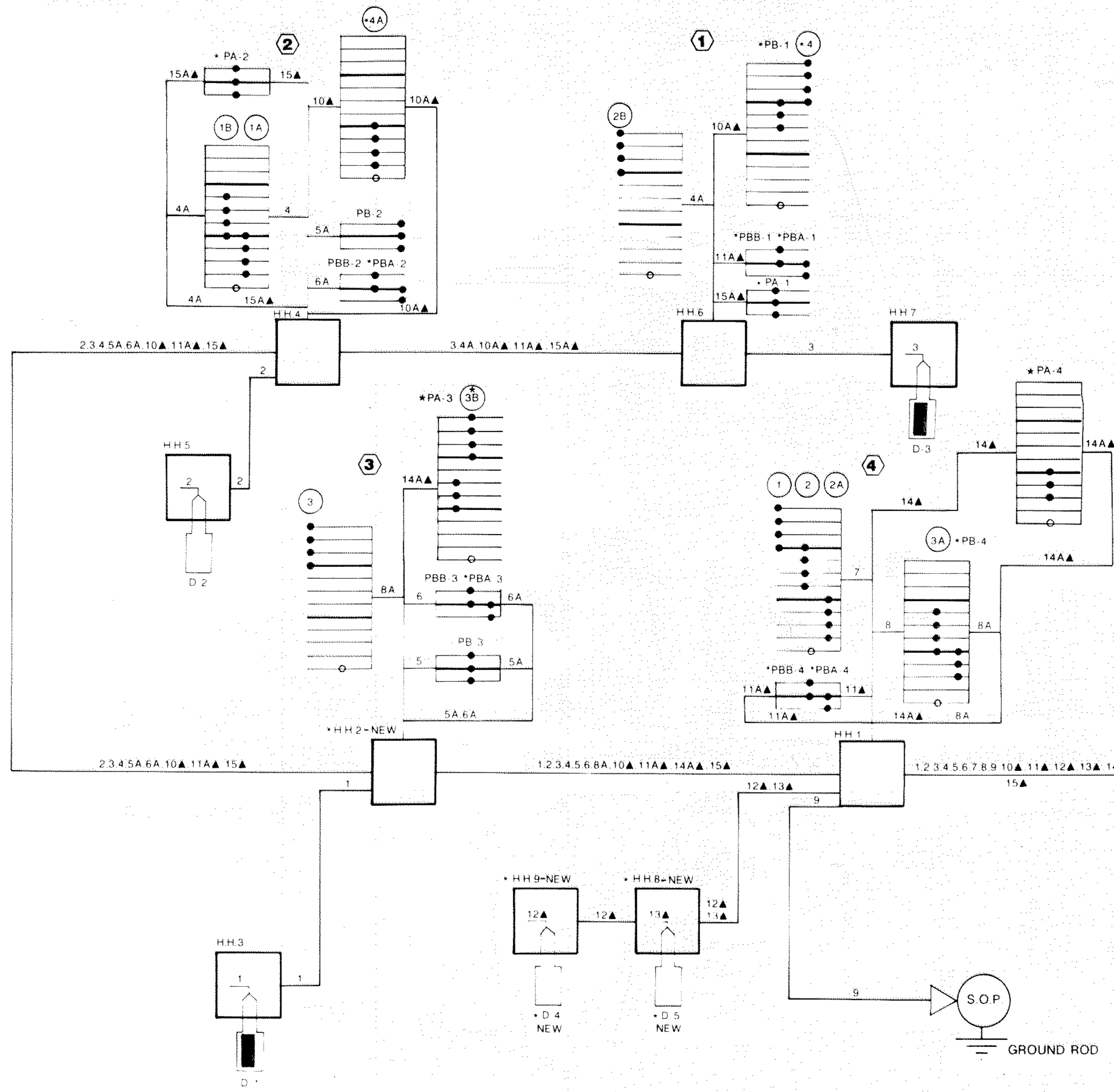
| NO. | BY | DATE | REVISIONS | ITEM | DESIGN | CHECKED |
|-----|-----|-------|--|------|--------|---------|
| 1 | JMG | 8/1 | PER CHANGE TO 40 FOOT RADII ON NORTHEAST/SOUTHEAST CORNERS | | | |
| 2 | GBT | 10/89 | RECORD DRAWING | | | |

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date: 6/13/89 Reg No. 9089



WOODBIDGE VILLAGE
TOWNHOMES
COON RAPIDS, MINNESOTA

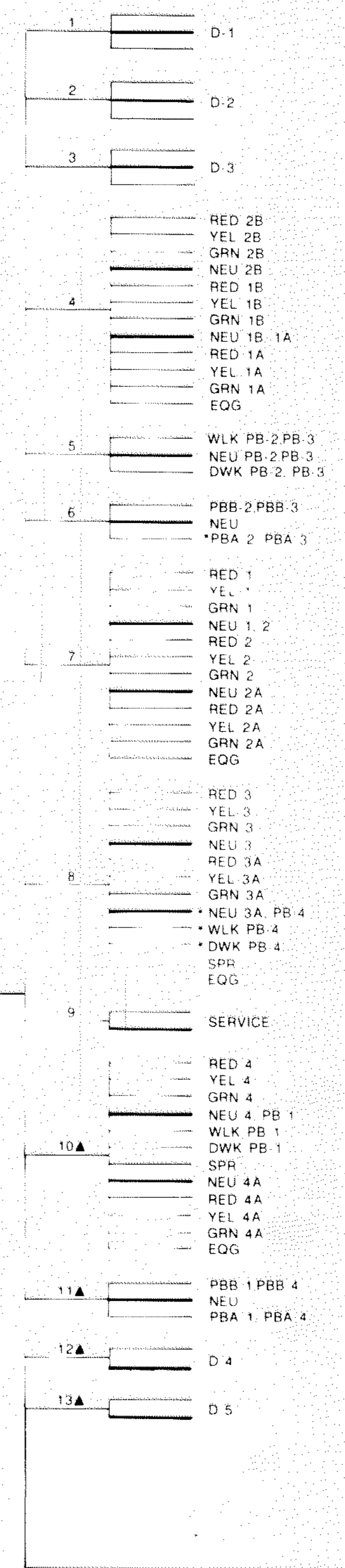
REVISED SIGNAL SYSTEM
INTERSECTION LAYOUT
EAST RIVER ROAD (C.S.A.H.1) @ 89th AVENUE N
FILE NO. 89048
DATE 5/23/89
34
85



FOR INFORMATION ONLY

10/24/89

CONTROLLER CABINET



- NOTES:
- 1) ▲=NEW CABLE-FURNISHED AND INSTALLED BY CONTRACTOR
 - 2) *|=NEW EQUIPMENT-FURNISHED AND INSTALLED BY CONTRACTOR

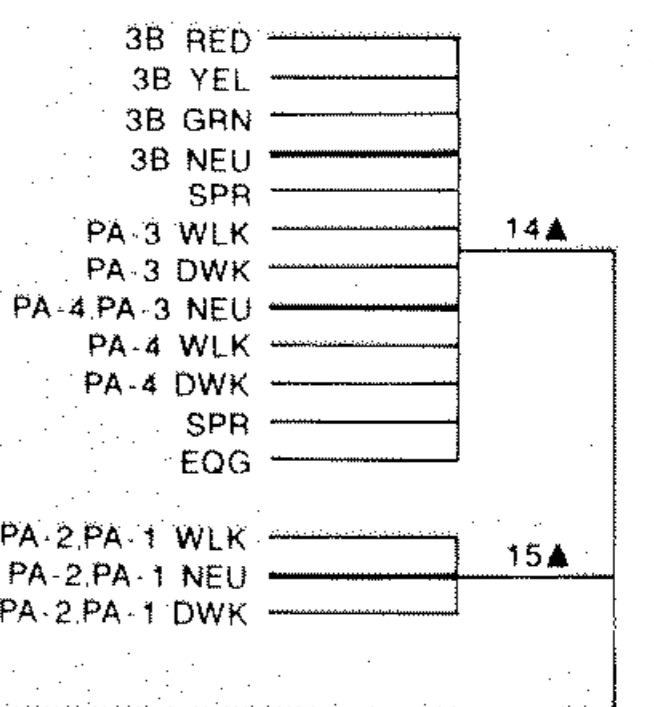
CONDUCTOR COLOR CODING

| | | |
|--------|-----------|----------|
| R | BLK | 2-1/C*6 |
| O | WH | 2-1/C*10 |
| BL | R | |
| WH | W | 3/C*12 |
| R/BLK | BLK | |
| O/BLK | BLK | |
| BL/BLK | BLK | 2/C*14 |
| WH/BLK | CLEAR | |
| BLK | | |
| BLK/WH | R OR O | |
| G/BLK | WH OR YEL | 3/C*20 |
| G | BLK OR BL | |

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

CONDUCTOR COLOR CODE

- R-RED
- O-ORANGE
- BL-BLUE
- WH-WHITE
- R/BLK-RED WITH BLACK TRACER
- O/BLK-ORANGE WITH BLACK TRACER
- BL/BLK-BLUE WITH BLACK TRACER
- WH/BLK-WHITE WITH BLACK TRACER
- BLK-BLACK
- BLK/WH-BLACK WITH WHITE TRACER
- G/BLK-GREEN WITH BLACK TRACER
- G-GREEN



| | | | | | | | | | |
|-----|-----|------|--|------|--------|---------|------|---------|--|
| 1 | JMG | B/1 | PER CHANGE TO 40 FOOT RADII ON NORTHEAST/SOUTHEAST CORNERS | | | | | | |
| NO. | BY | DATE | REVISIONS | ITEM | DESIGN | CHECKED | Date | Reg No. | |

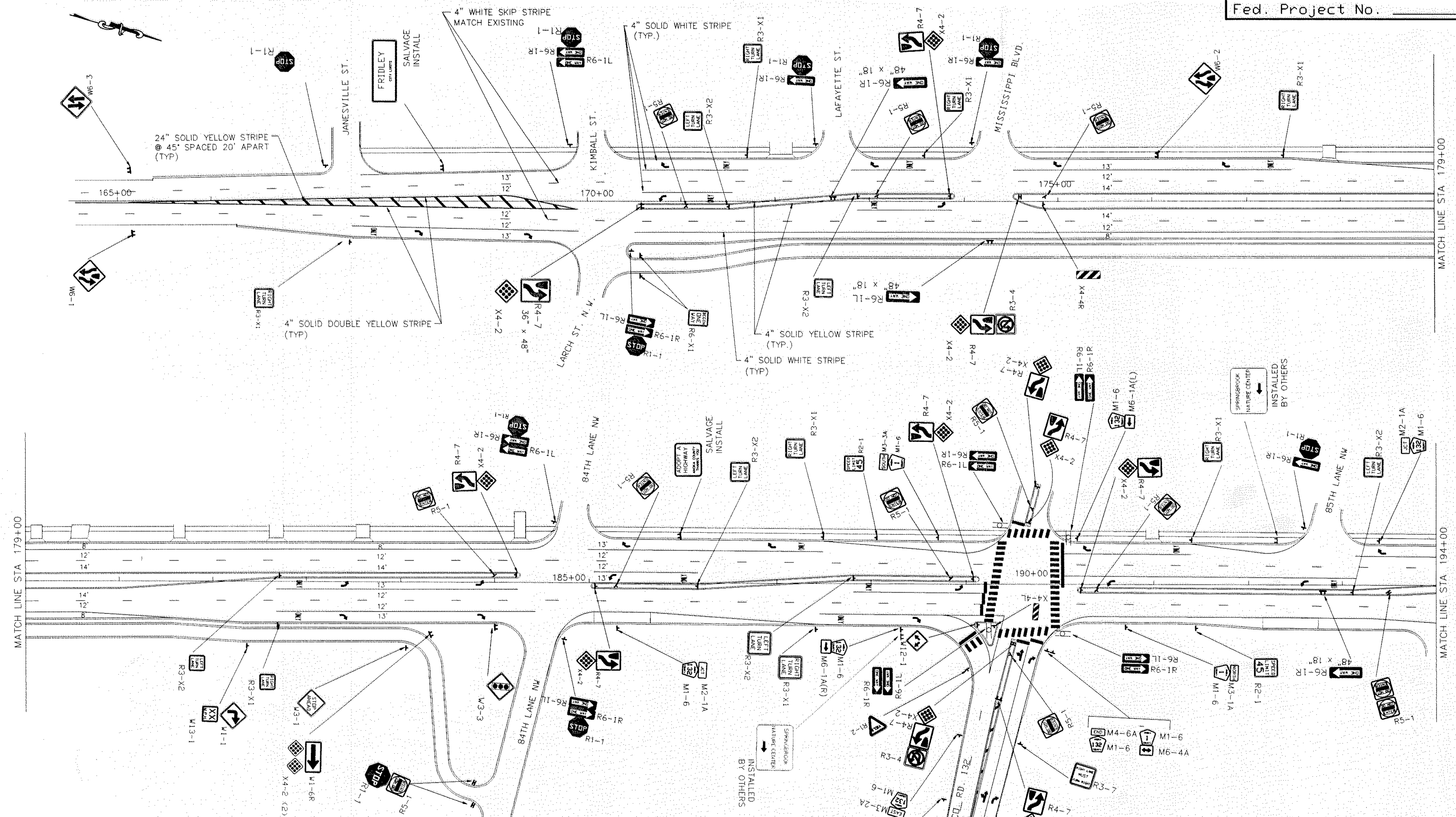
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota



WOODBIDGE VILLAGE
TOWNHOMES
COON RAPIDS, MINNESOTA

REVISED SIGNAL SYSTEM
FIELD WIRING DIAGRAM
EAST RIVER ROAD (CSAH 1) AT 89th AVENUE N

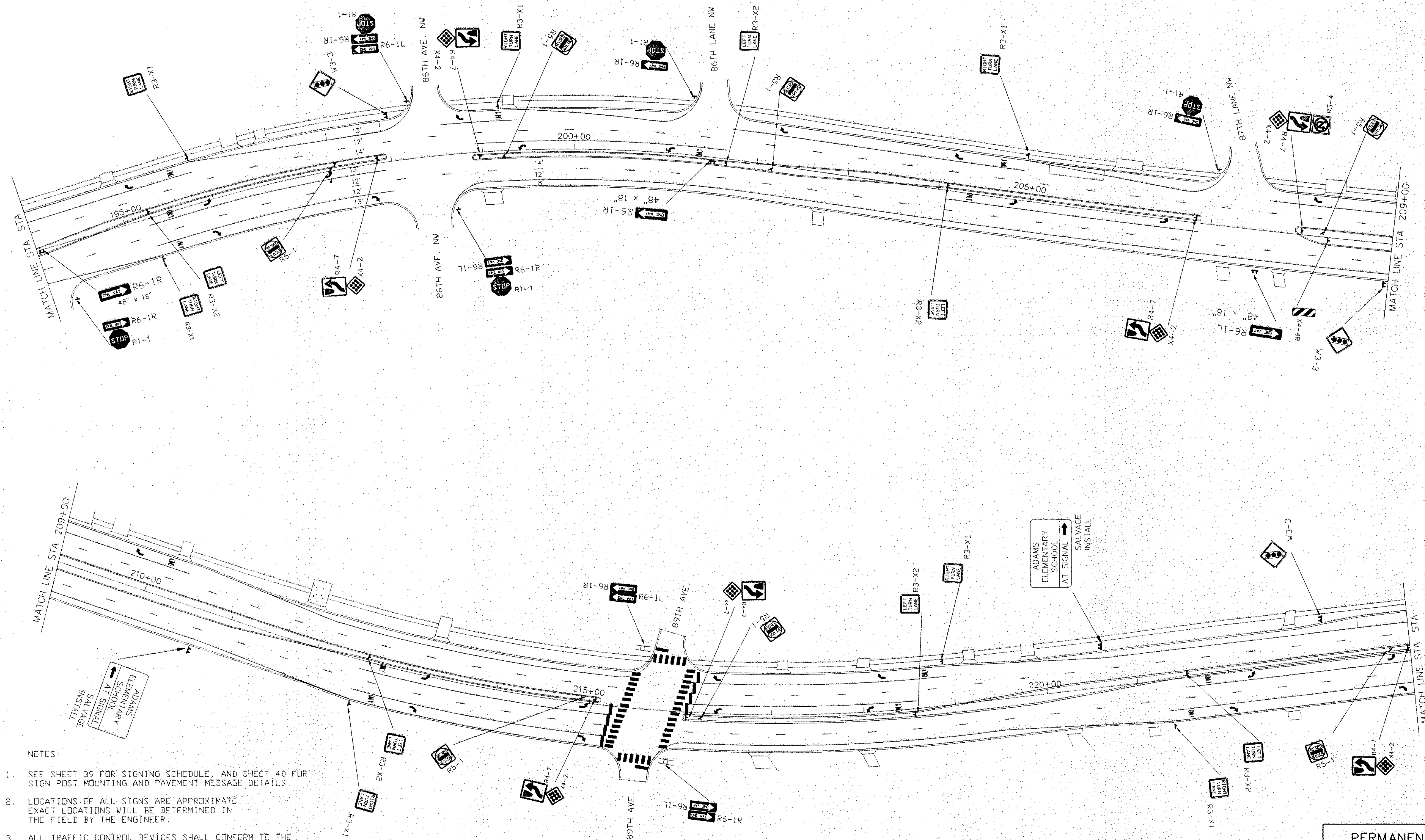
| | | |
|----------|---------|----|
| FILE NO. | 89048 | 35 |
| DATE | 5/23/89 | 85 |



- NOTES:
- SEE SHEET 39 FOR SIGNING SCHEDULE, AND SHEET 40 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.
 - LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX "B" DATED NOVEMBER 1992.

| REVISIONS | BY | DATE |
|-----------|----|------|
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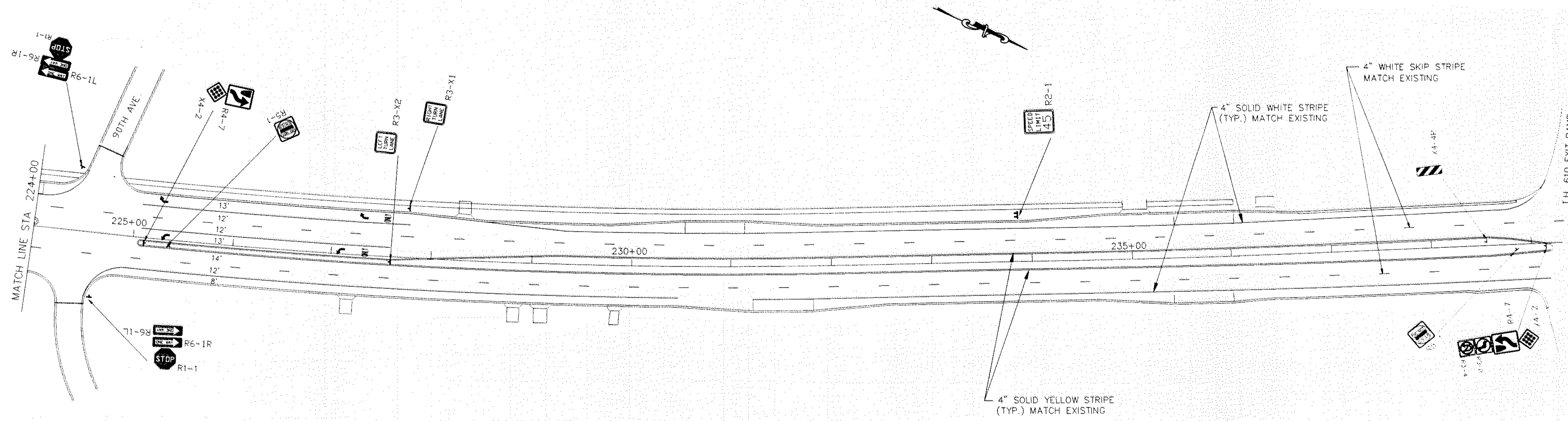
PERMANENT
SIGNING / STRIPING



- NOTES:
1. SEE SHEET 39 FOR SIGNING SCHEDULE, AND SHEET 40 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.
 2. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX "B" DATED NOVEMBER 1992.

| REVISIONS | DATE | BY |
|-----------|------|----|
| | | |
| | | |
| | | |

PERMANENT
SIGNING / STRIPING



NOTES:

1. SEE SHEET 39 FOR SIGNING SCHEDULE, AND SHEET 40 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.
2. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
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| REVISIONS | BY | DATE |
|-----------|----|------|
| | | |
| | | |
| | | |

PERMANENT
SIGNING / STRIPING

| M.U.T.C.D. CODE | SIZE (INCHES) | AREA (SQ. FT.) | QTY. GROUND POST MOUNT INSTALLATIONS | QTY. ISLAND MOUNT INSTALLATIONS | SIGN PANEL | #POST/INSTALLATION MOUNTING HEIGHT |
|-----------------|-----------------|----------------|--------------------------------------|---------------------------------|------------|------------------------------------|
| R1-1 | 30" x 30" | 6.25 | 17 | 0 | | 1 7.0' |
| R1-2 | 36" x 36" x 36" | 9.00 | 1 | 0 | | 1 7.0' |
| R2-1 | 24" x 30" | 5.00 | 3 | 0 | | 1 7.0' |
| R2-1 | 24" x 30" | 5.00 | 1 | 0 | | 1 7.0' |
| R3-4 | 24" x 24" | 4.00 | 0 | 0 | | 1 7.0' |
| R3-8 | 30" x 30" | 6.25 | 1 | 0 | | 1 7.0' |
| R3-X1 | 30" x 30" | 6.25 | 16 | 0 | | 1 7.0' |
| R3-X2 | 30" x 30" | 6.25 | 0 | 13 | | 1 7.0' |
| R3-7 | 30" x 30" | 6.25 | 0 | 1 | | 1 7.0' |
| R4-7 | 36" x 48" | 12.00 | 0 | 2 | | 2 7.0' |
| R4-7 | 24" x 30" | 5.00 | 0 | 18 | | 1 7.0' |
| X4-2 | 18" x 18" | 2.25 | 0 | 20 | | 1 7.0' |
| R5-1 | 30" x 30" | 6.25 | 3 | 19 | | 1 7.0' |
| R6-1R | 36" x 12" | 3.00 | 19 | 0 | | 1 7.0' |
| R6-1R | 48" x 18" | 6.00 | 0 | 4 | | 2 7.0' |
| R6-1L | 36" x 12" | 3.00 | 13 | 0 | | 1 7.0' |
| R6-1L | 48" x 18" | 6.00 | 1 | 1 | | 2 7.0' |
| R6-X1 | 24" x 30" | 5.00 | 2 | 0 | | 1 7.0' |

| M.U.T.C.D. CODE | SIZE (INCHES) | AREA (SQ. FT.) | QTY. GROUND POST MOUNT INSTALLATIONS | QTY. ISLAND MOUNT INSTALLATIONS | SIGN PANEL | #POST/INSTALLATION MOUNTING HEIGHT |
|-----------------|---------------|----------------|--------------------------------------|---------------------------------|------------|------------------------------------|
| W1-1R | 30" x 30" | 6.25 | 1 | 0 | | 1 7.0' |
| W13-1 | 24" x 24" | 4.00 | 1 | 0 | | 1 7.0' |
| W3-1a | 36" x 36" | 9.00 | 1 | 0 | | 2 7.0' |
| W3-3 | 36" x 36" | 9.00 | 4 | 0 | | 2 7.0' |
| W6-1 | 36" x 36" | 9.00 | 1 | 0 | | 2 7.0' |
| W6-2 | 36" x 36" | 9.00 | 1 | 0 | | 2 7.0' |
| W6-3 | 36" x 36" | 9.00 | 1 | 0 | | 2 7.0' |
| W12-1 | 24" x 24" | 4.00 | 1 | 0 | | 1 7.0' |
| X4-4R | 12" x 36" | 3.00 | 0 | 3 | | 1 4.0' |
| X4-4L | 12" x 36" | 3.00 | 0 | 1 | | 1 4.0' |

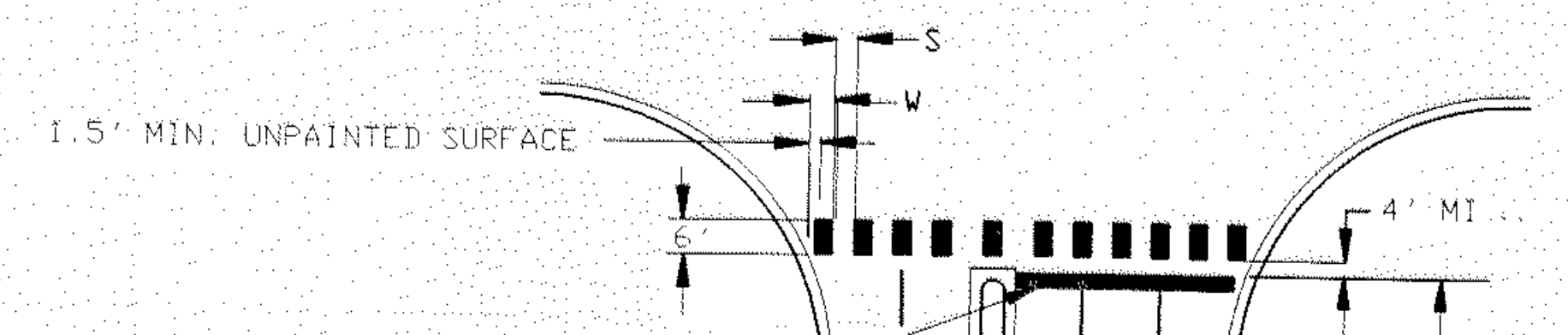
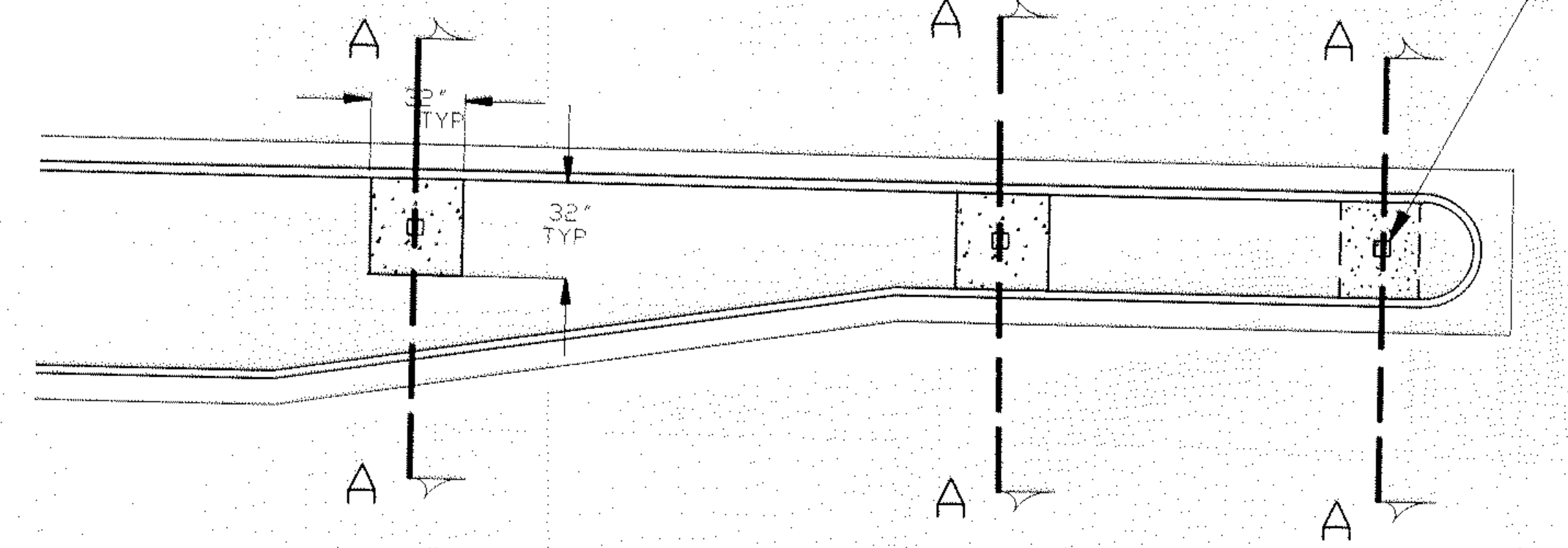
| M.U.T.C.D. CODE | SIZE (INCHES) | AREA (SQ. FT.) | QTY. GROUND POST MOUNT INSTALLATIONS | QTY. ISLAND MOUNT INSTALLATIONS | SIGN PANEL | #POST/INSTALLATION MOUNTING HEIGHT |
|-----------------|---------------|----------------|--------------------------------------|---------------------------------|------------|------------------------------------|
| M2-1A | 21" x 15" | 2.19 | 2 | 0 | | 1 7.0' |
| M3-2A | 24" x 12" | 2.00 | 1 | 0 | | 1 7.0' |
| M4-6A | 24" x 12" | 2.00 | 1 | 0 | | 1 7.0' |
| M1-6 | 24" x 24" | 4.00 | 6 | 0 | | 1 7.0' |
| M6-1A(L) | 21" x 15" | 2.18 | 1 | 0 | | 1 7.0' |
| M6-1A(R) | 21" x 15" | 2.18 | 1 | 0 | | 1 7.0' |
| M3-1A | 24" x 12" | 2.00 | 1 | 0 | | 1 7.0' |
| M3-3A | 24" x 12" | 2.00 | 1 | 0 | | 1 7.0' |
| M1-6 | 24" x 24" | 4.00 | 3 | 0 | | 1 7.0' |
| M6-4A | 21" x 15" | 2.18 | 1 | 0 | | 1 7.0' |
| W1-6 | 48" x 24" | 8.00 | 1 | 0 | | 4 7.0' |
| X4-2 | 18" x 18" | 2.25 | 2 | 0 | | 1 7.0' |
| R3-2 | 24" x 24" | 4 | 1 | 0 | | 1 7.0' |

(14 R6-1R MOUNTED ABOVE R1-1)
 (6 R6-1R MOUNTED ON SIGNAL POLE)
 (8 R6-1L MOUNTED ABOVE R1-1)
 (6 R6-1L MOUNTED ON SIGNAL POLE)

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX "B" DATED NOVEMBER 1992.
- TO BE MOUNTED BEHIND R4-7's AS INDICATED ON PERMANENT SIGNING / STRIPING PLANS
- TWO SIGNS MOUNTED BEHIND TWO R1-1's AS INDICATED ON PERMANENT SIGNING / STRIPING PLANS
- ADVISORY SPEED TO BE DETERMINED, IN THE FIELD BY THE ENGINEER.

PERMANENT SIGNING QUANTITIES

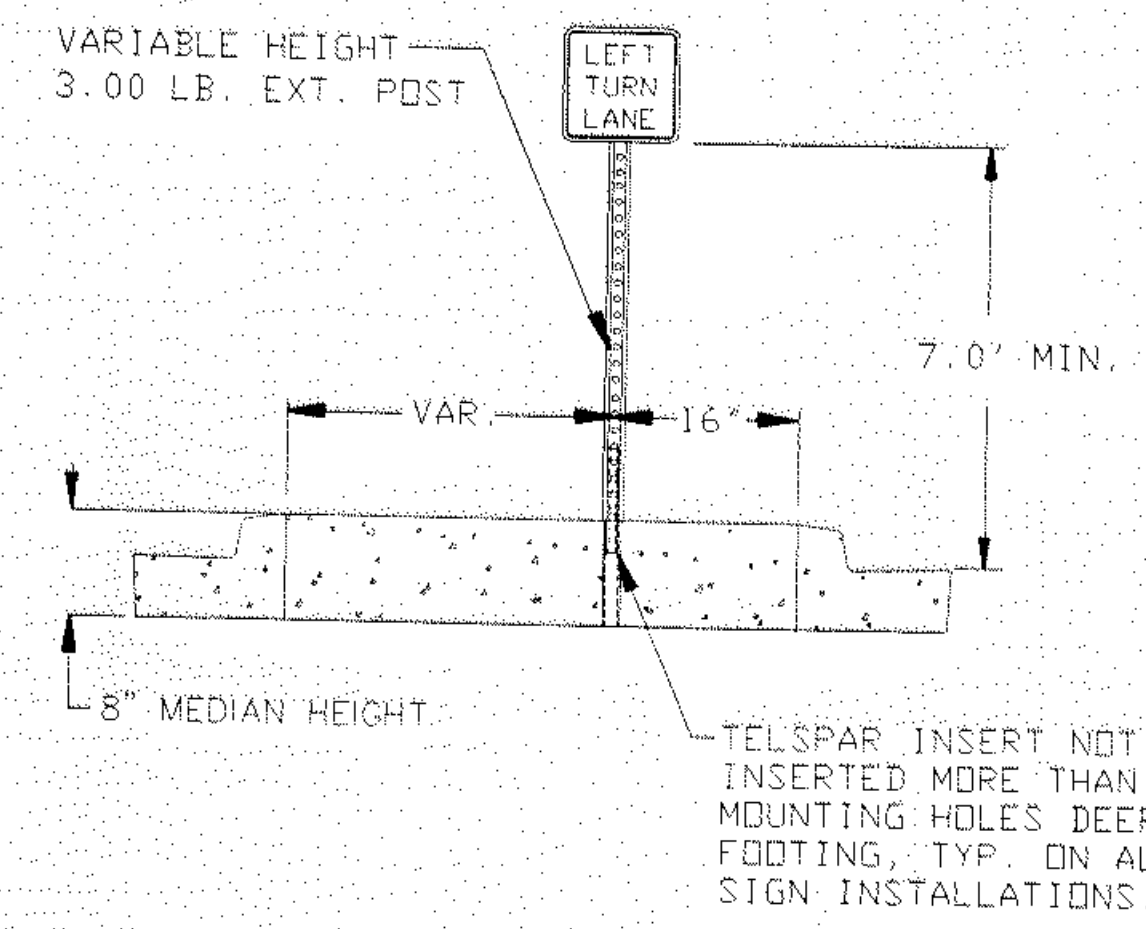
INSTALL 1 3/4" x 1 3/4" x 8" SOLID GALVANIZED SQUARE TUBING IN ISLAND NOSE DURING CONCRETE POUR, PLUMB AS REQUIRED. TAPE BOTTOM OF TUBING TO PREVENT CONCRETE FROM ENTERING TUBING.



| (L) | (W) | (S) |
|----------------------|------------------------|----------------|
| WIDTH OF INSIDE LANE | WIDTH OF PAINTED AREAS | WIDTH OF SPACE |
| 9' | 2.0' | 2.5' |
| 10' | 2.5' | 2.5' |
| 11' | 2.5' | 3.0' |
| 12' | 3.0' | 3.0' |
| 13' | 3.0' | 3.5' |

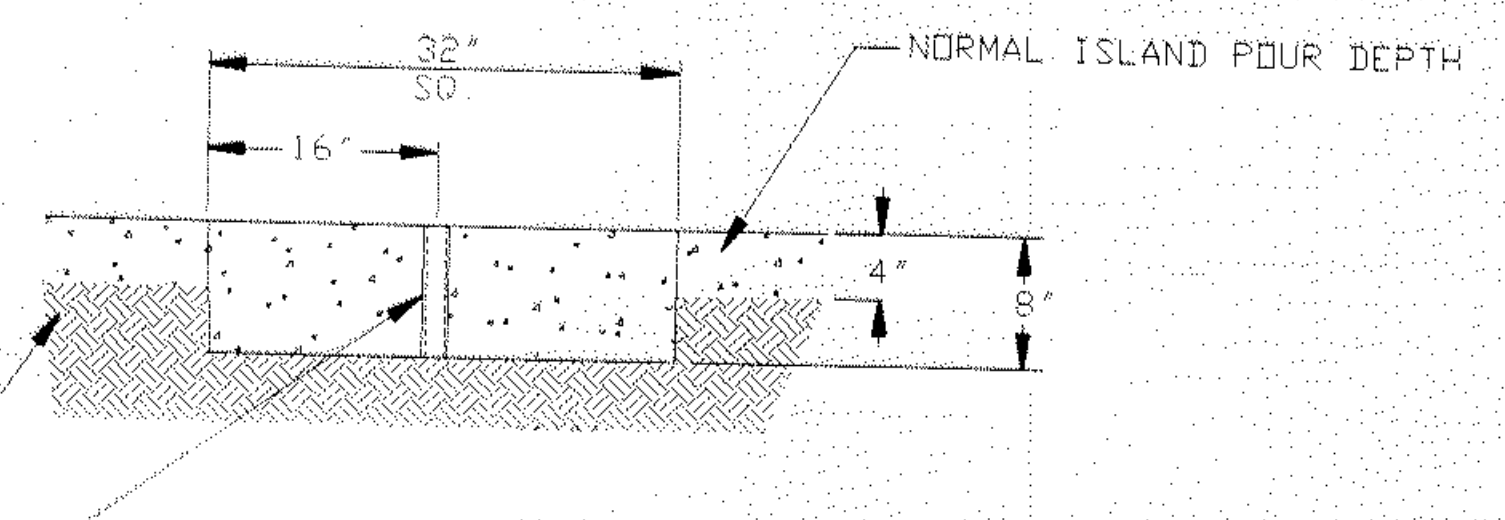
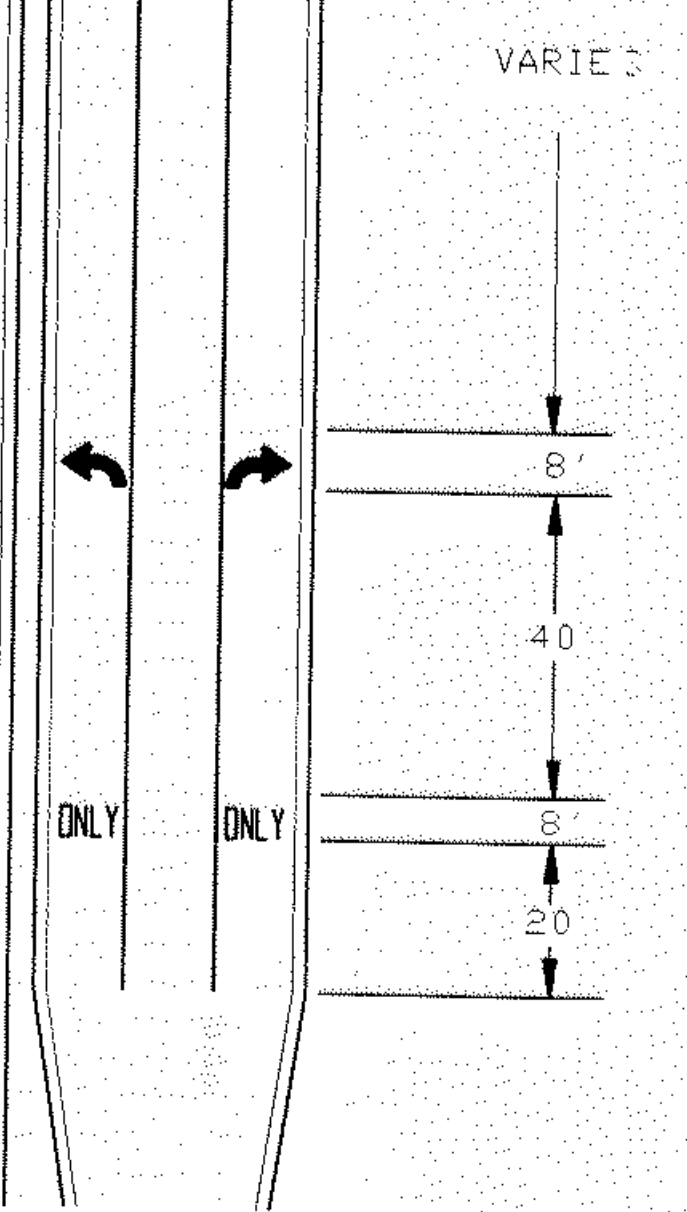
1 1/2" x 1 1/2" x 8" SOLID GALVANIZED TUBING WITH 7/16" DIA. HOLES 1" ON CENTER, ON ALL 4 SIDES. WALL THICKNESS GAUGE #12 (.105 IN.) INSERTED AT THE TIME OF SIGN INSTALLATION TYPICAL.

ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATION TYPICAL



NOTES: CROSSWALKS:

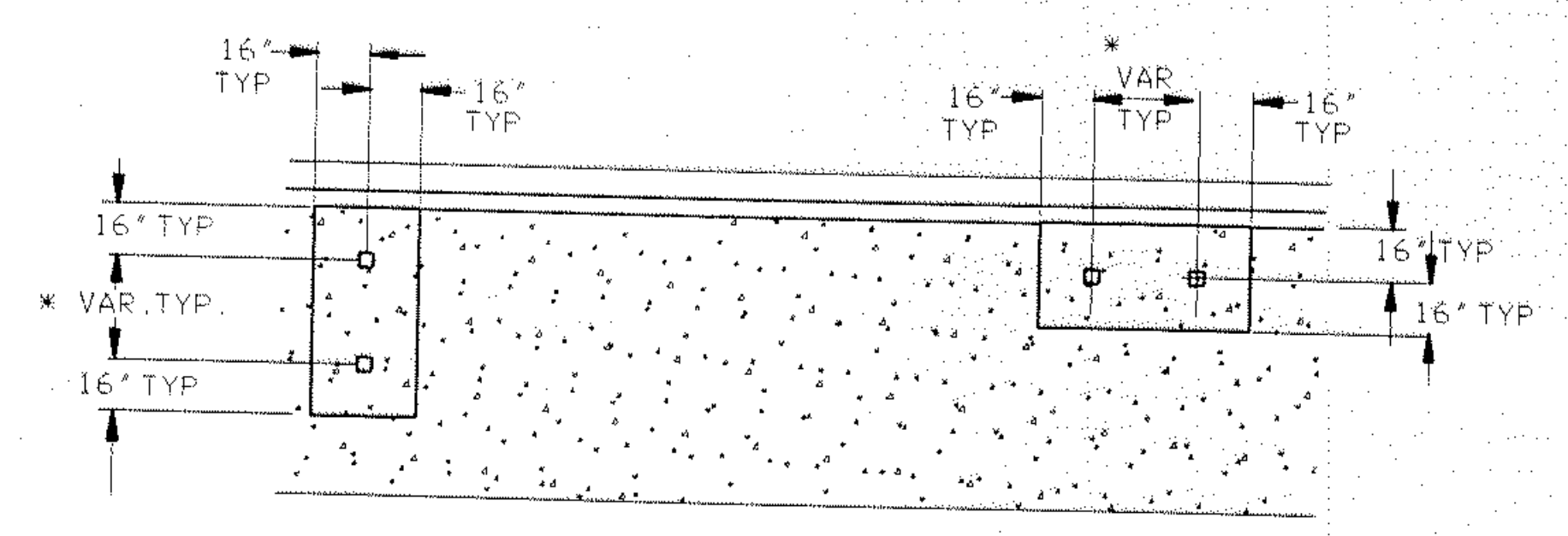
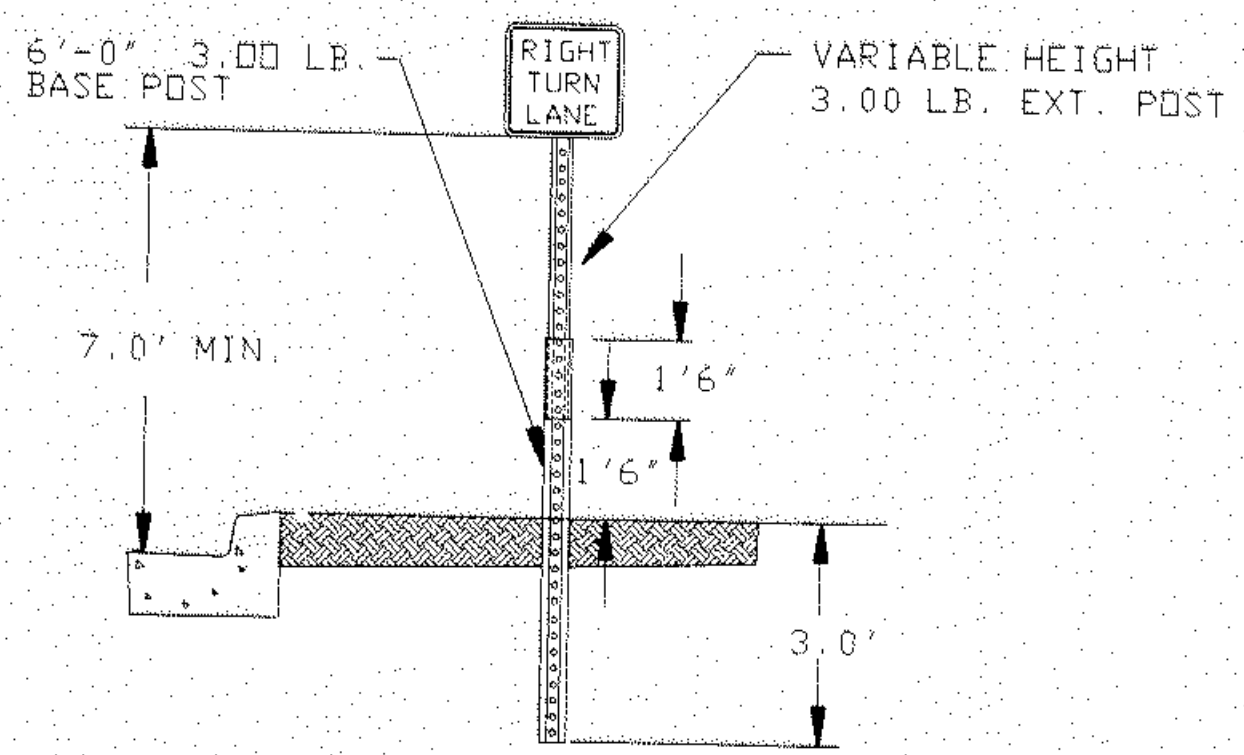
- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
- 2.) ZEBRA CROSSWALKS AND STOP BARS.
- 3.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED-RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
- 4.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 5.) A MIN. OF 1.5' CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 6.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' INSIDE LANE.



SECTION A-A

INSTALL 1 3/4" x 1 3/4" x 8" SOLID WALL GALVANIZED SQUARE TUBING TAPE BOTTOM OF TUBING TO PREVENT CONCRETE FROM ENTERING TUBE. PLUMB AND ALIGN AT TIME OF POUR AS REQUIRED. TYPICAL.

GROUND POST MOUNT SIGN INSTALLATION TYPICAL



DOUBLE POST FOOTINGS

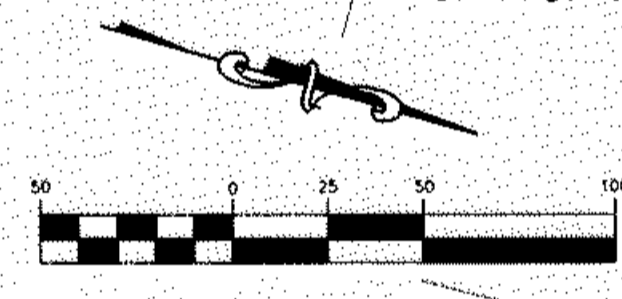
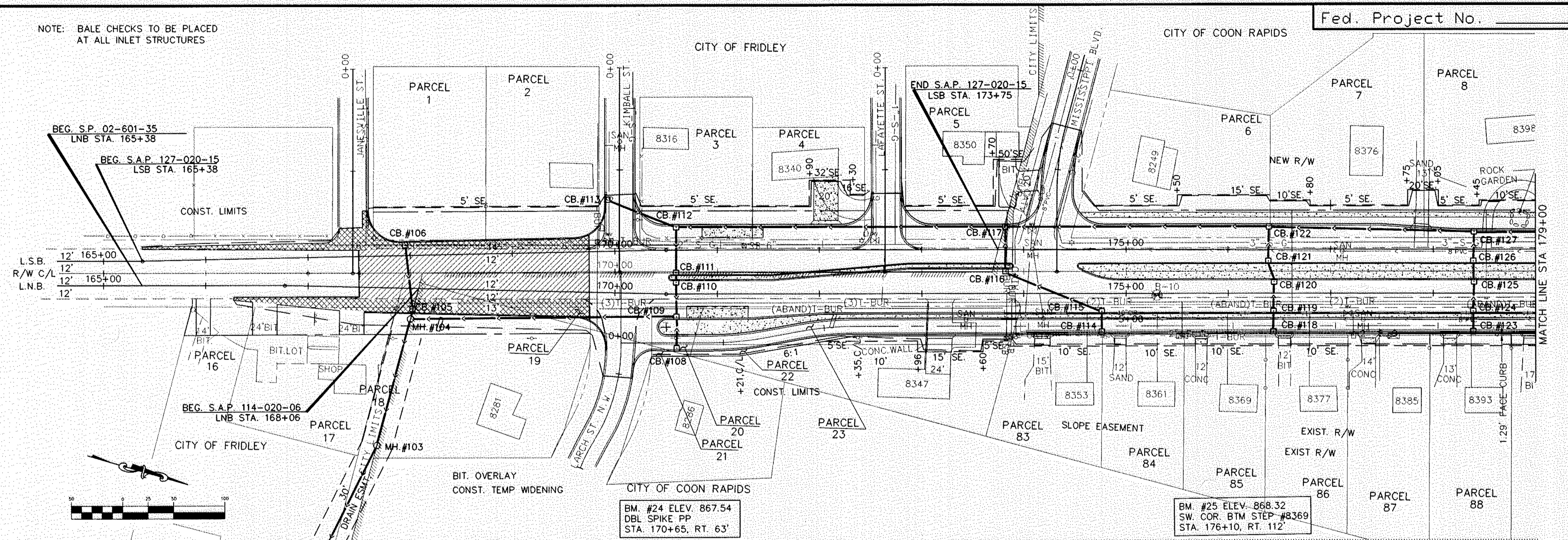
ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST

GENERAL NOTE:

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER 1992.

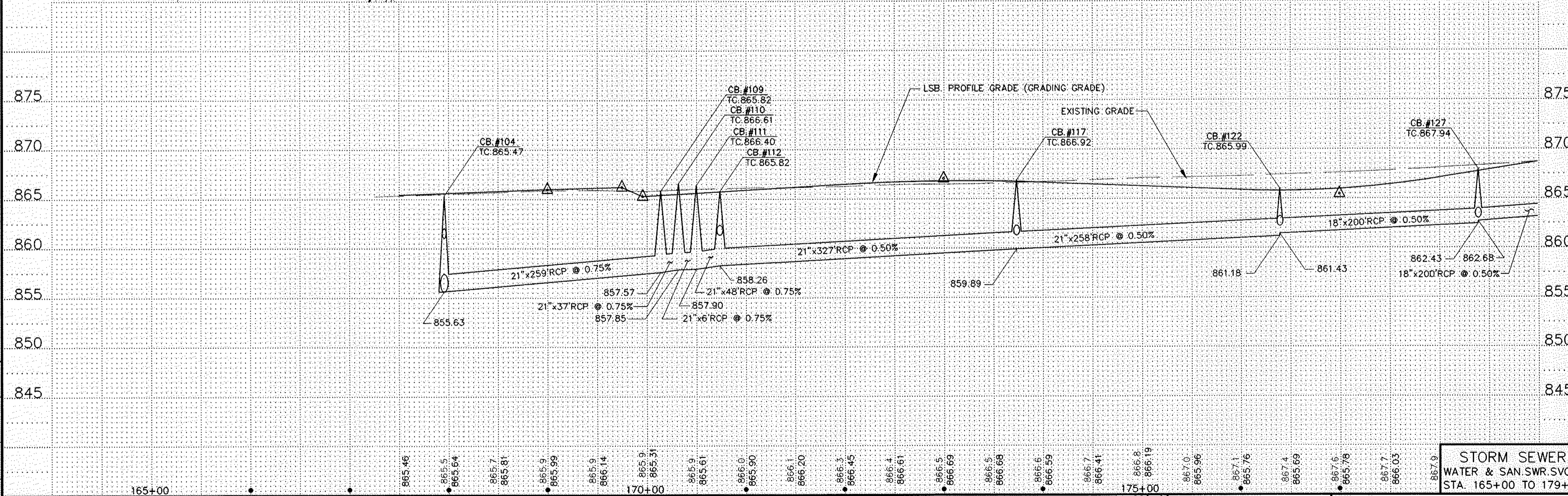
NOTE: BALE CHECKS TO BE PLACED AT ALL INLET STRUCTURES

Fed. Project No. _____



BM. #24 ELEV. 867.54
DBL SPIKE PP
STA. 170+65, RT. 63'

BM. #25 ELEV. 868.32
SW. COR. BTM STEP #8369
STA. 176+10, RT. 112'



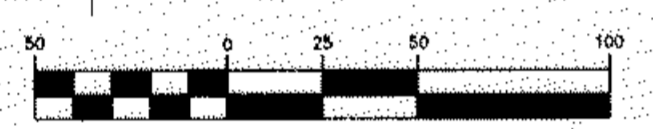
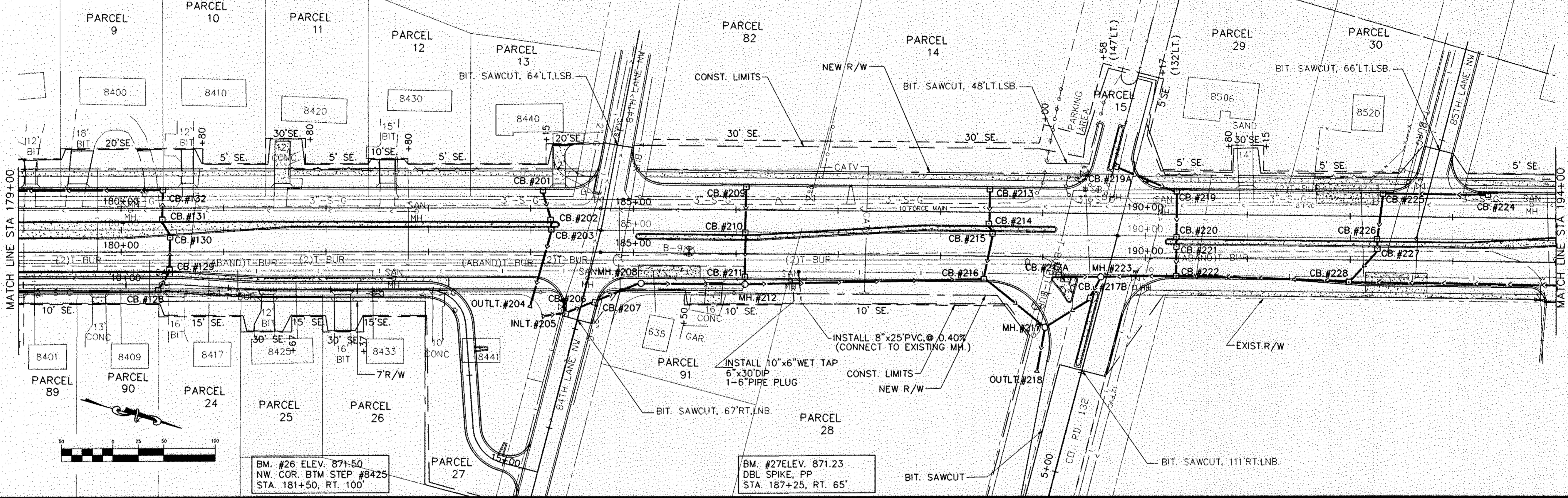
| REVISIONS | DATE | BY |
|-----------|----------|------|
| 1 | 07/06/95 | K.J. |

CERTIFIED BY _____ P. E. REG NO. _____ 19 _____ S. P. 02-601-35 S. A. P. 114-020-06 127-020-15 C. P. _____

STORM SEWER
WATER & SAN. SW. SVCS.
STA. 165+00 TO 179+00

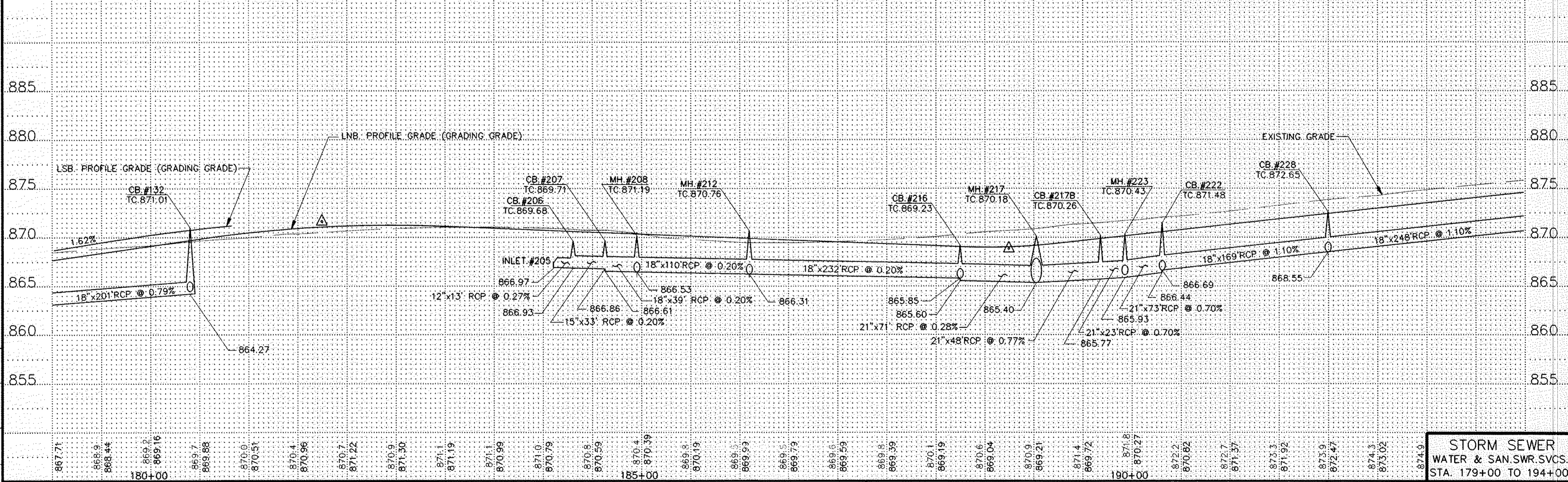
Sheet No. 43 of 85 Sheets

NOTE: BALE CHECKS TO BE PLACED AT ALL INLET STRUCTURES



BM. #26 ELEV. 871.50
NW. COR. BTM STEP #8425
STA. 181+50, RT. 100'

BM. #27 ELEV. 871.23
DBL SPIKE, PP
STA. 187+25, RT. 65'

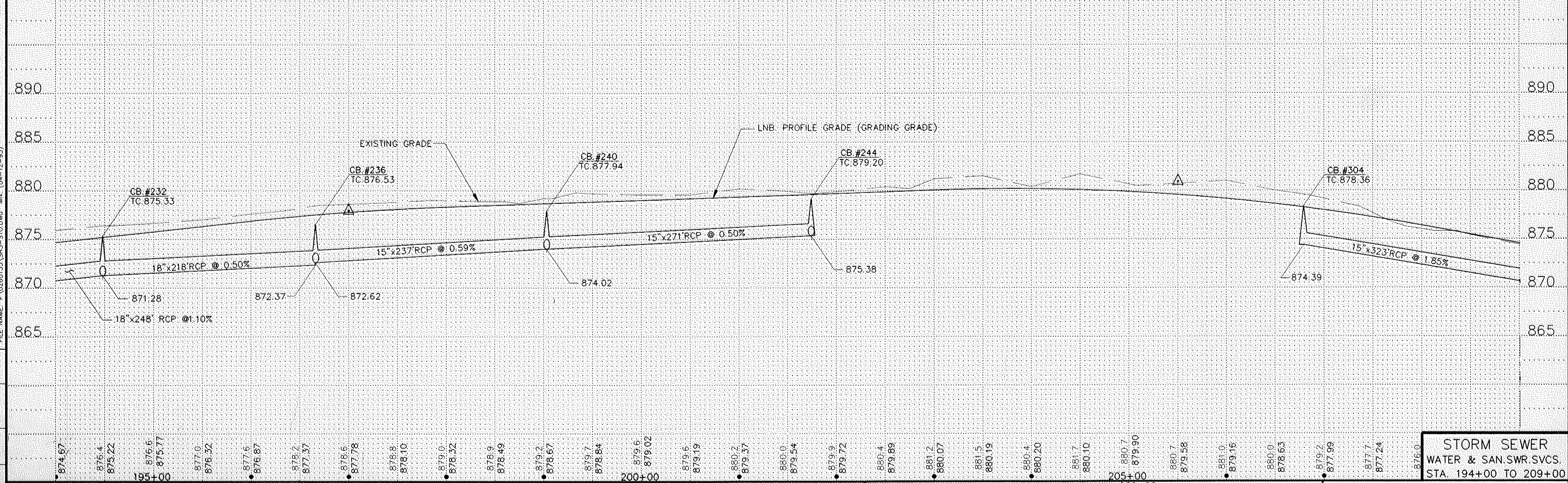
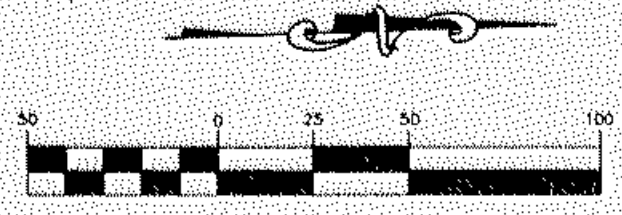
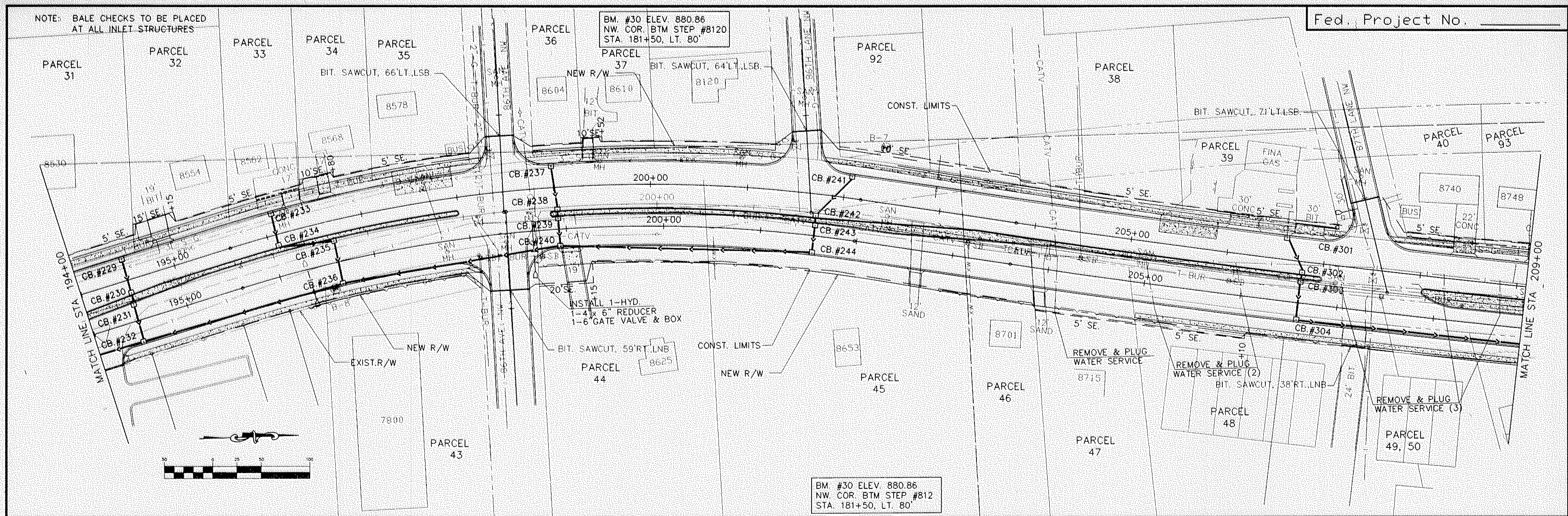


| REVISIONS | DATE | BY |
|-----------|----------|------|
| 1 | 07-06-95 | K.J. |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 867.71 | 868.9 | 868.44 | 869.2 | 869.16 | 869.7 | 869.88 | 870.0 | 870.51 | 870.4 | 870.96 | 870.7 | 871.22 | 870.9 | 871.50 | 871.1 | 871.19 | 871.1 | 871.99 | 871.0 | 870.79 | 870.8 | 870.59 | 870.4 | 870.39 | 869.8 | 870.19 | 869.93 | 869.5 | 869.79 | 869.6 | 869.59 | 869.8 | 869.59 | 870.1 | 869.19 | 870.6 | 869.04 | 870.9 | 869.21 | 871.4 | 869.72 | 871.8 | 870.27 | 872.2 | 870.82 | 872.7 | 871.57 | 873.3 | 871.92 | 873.9 | 872.47 | 874.3 | 873.02 | 874.9 |
|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|

STORM SEWER
WATER & SAN. SWR. SVCS.
STA. 179+00 TO 194+00

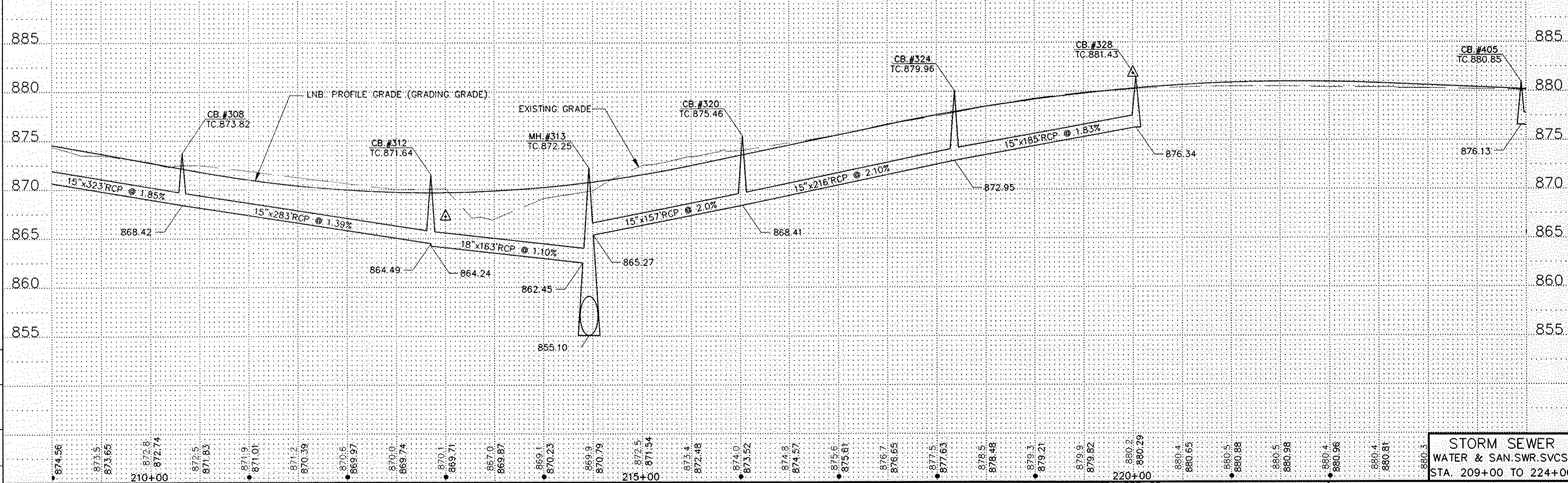
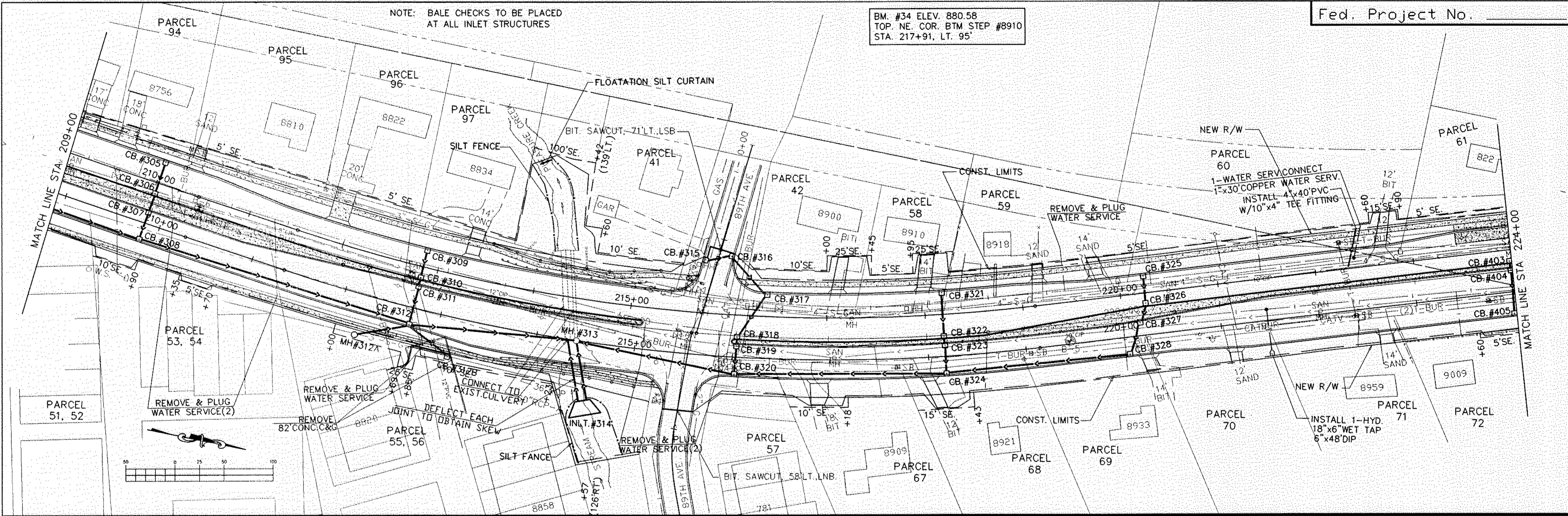
NOTE: BALE CHECKS TO BE PLACED AT ALL INLET STRUCTURES



| REVISIONS | DATE | BY |
|-----------|------|----|
| | | |
| | | |
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BM. #34 ELEV. 880.58
TOP. NE. COR. BTM STEP #8910
STA. 217+91, LT. 95'

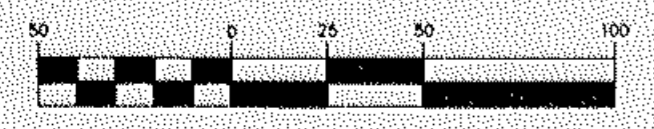
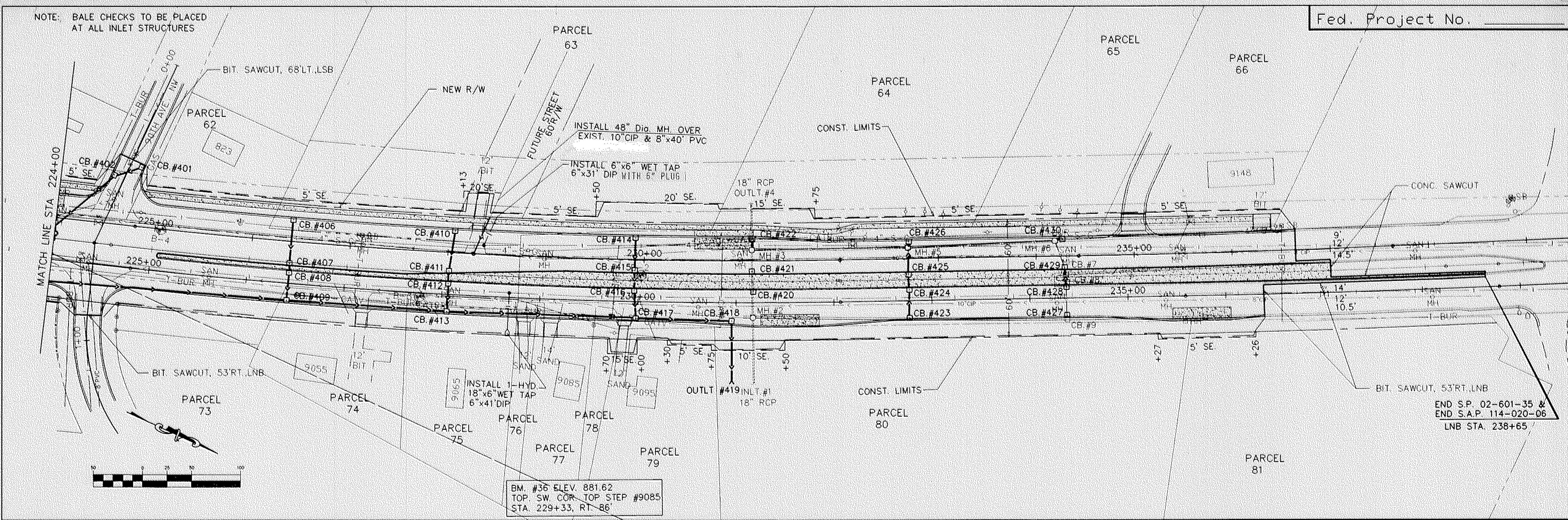
NOTE: BALE CHECKS TO BE PLACED
AT ALL INLET STRUCTURES



| REVISIONS: | DATE | BY |
|------------|----------|------|
| 1 | 07-05-95 | K.J. |

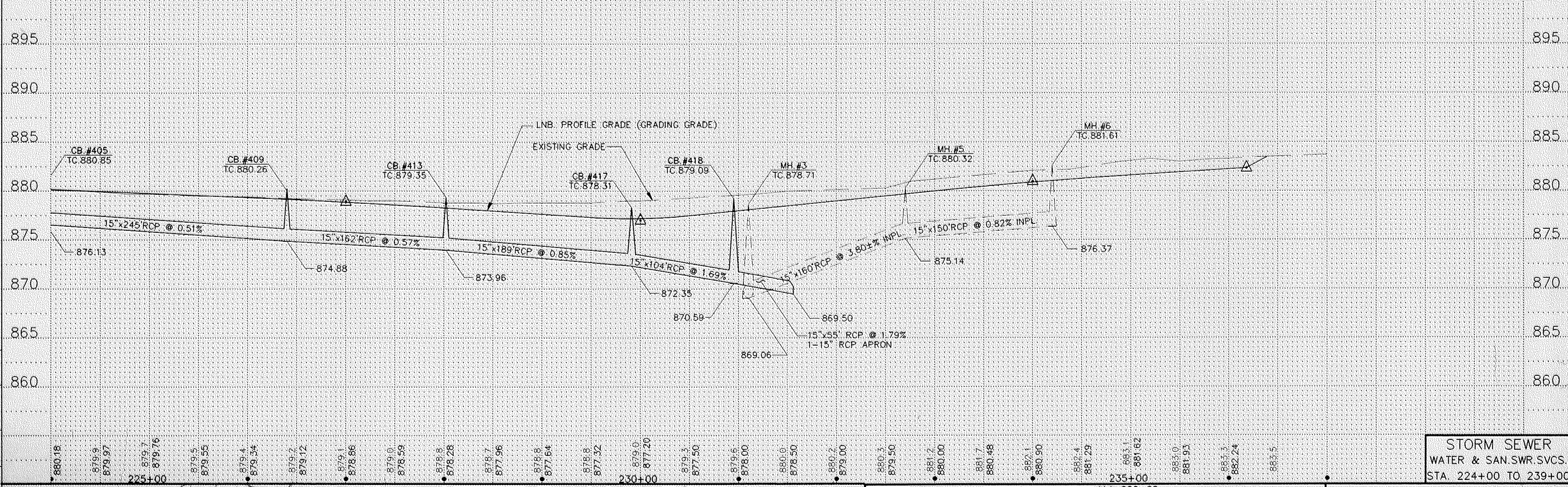
**STORM SEWER
WATER & SAN. SWR. SVCS.
STA. 209+00 TO 224+00**

NOTE: BALE CHECKS TO BE PLACED AT ALL INLET STRUCTURES

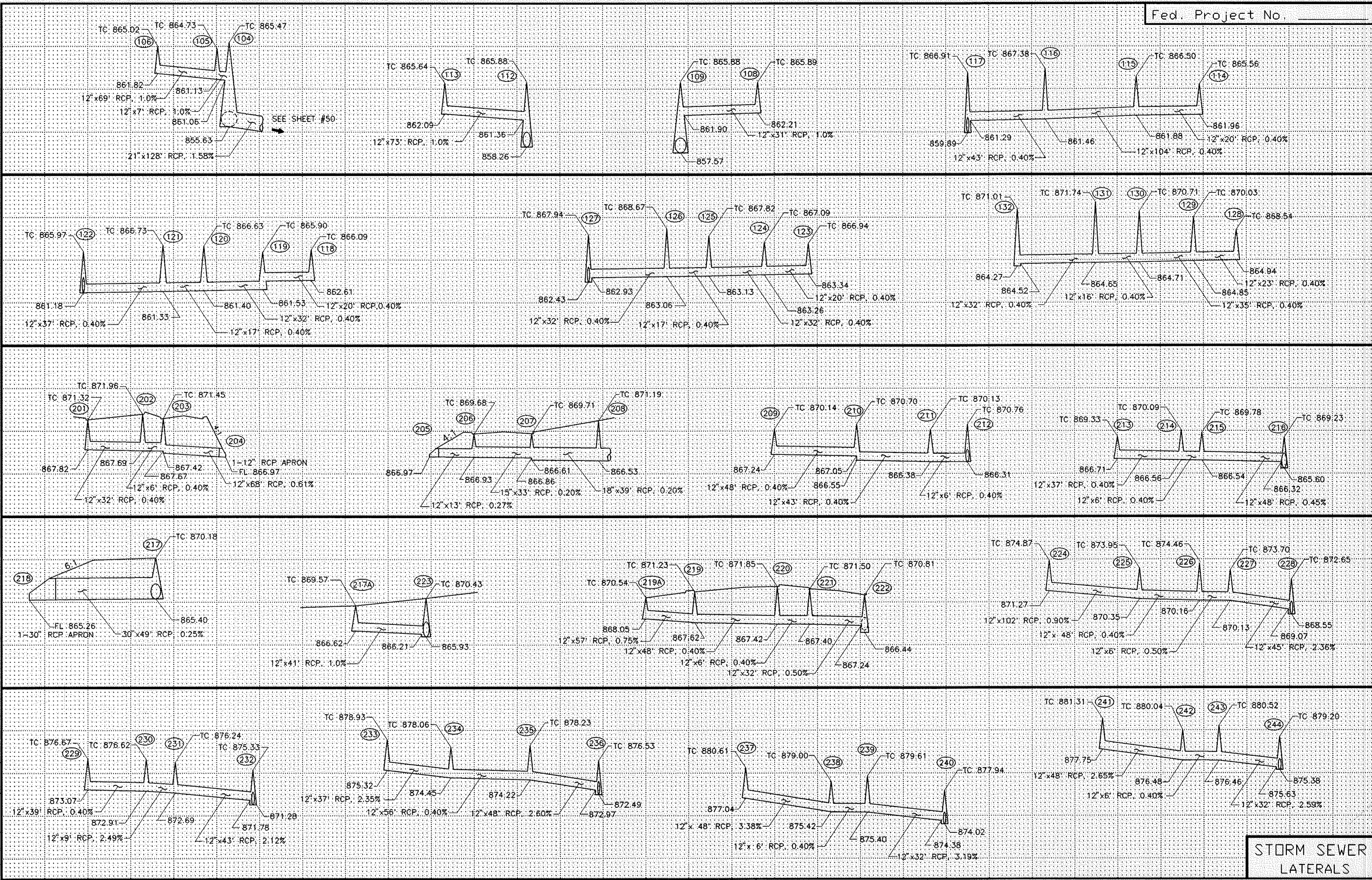


BM. #36 ELEV. 881.62
TOP SW. COR. TOP STEP #9085
STA. 229+33, RT. 86'

END S.P. 02-601-35 &
END S.A.P. 114-020-06
LNB STA. 238+65

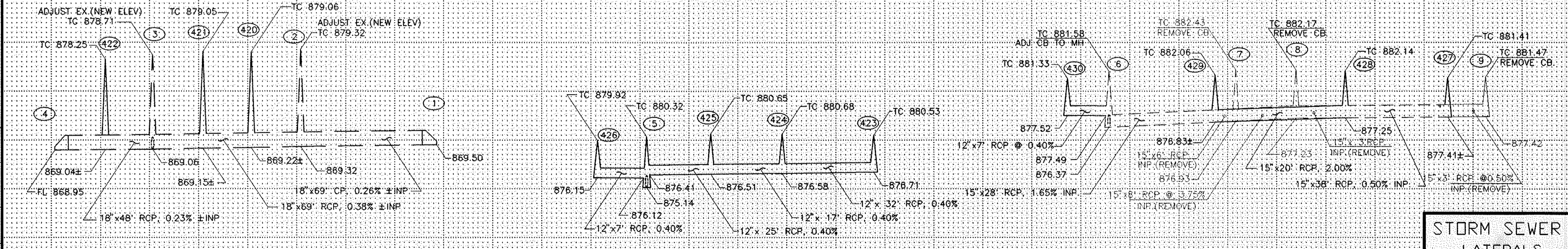
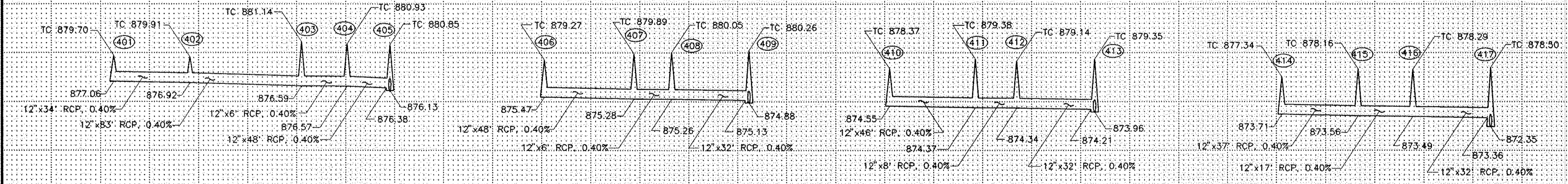
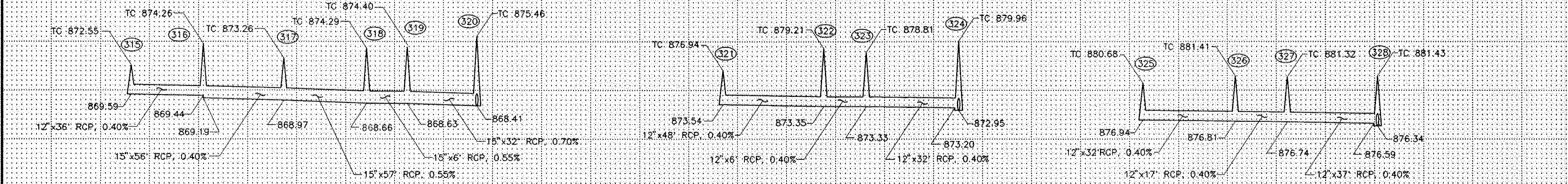
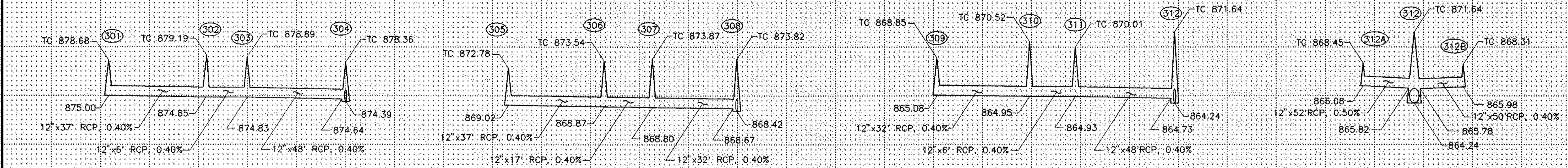


| REVISIONS | DATE | BY |
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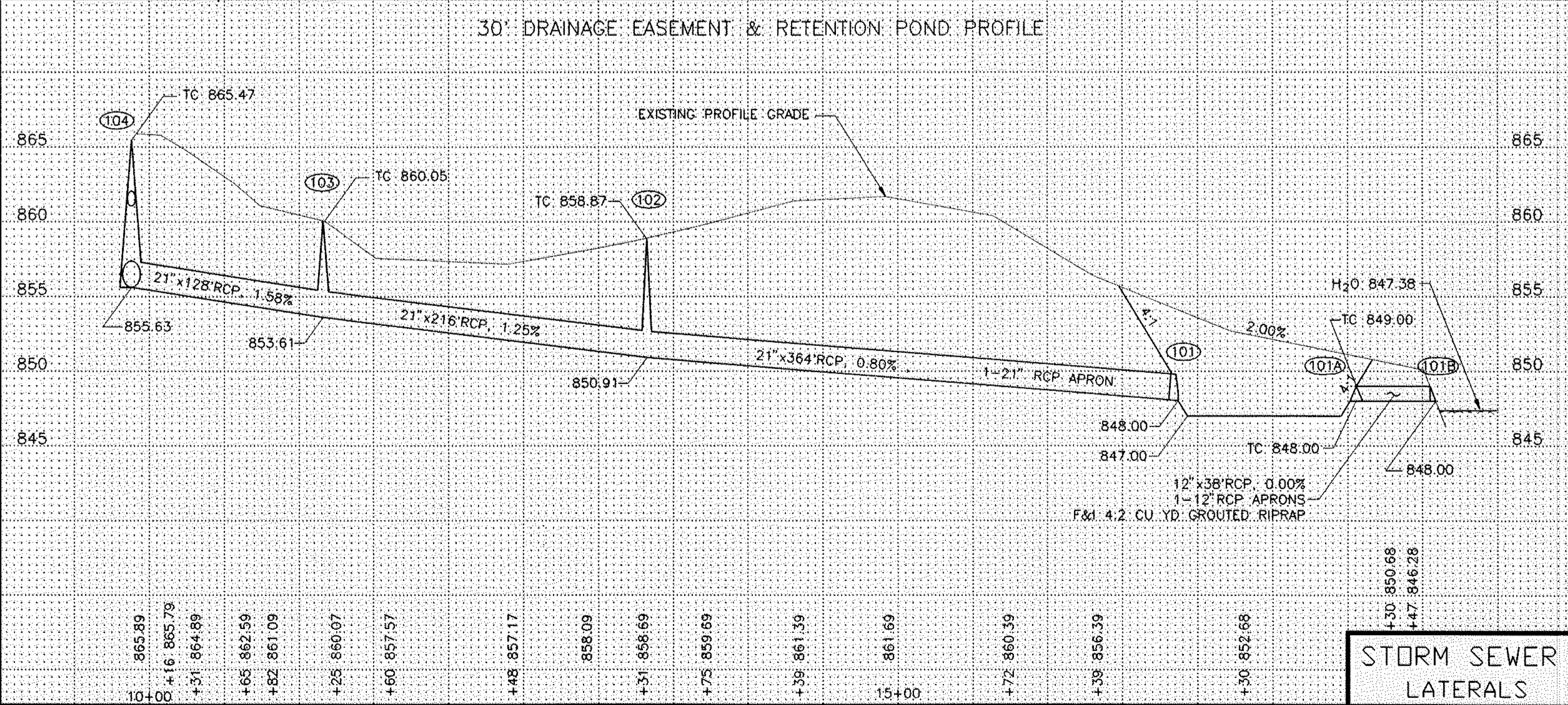
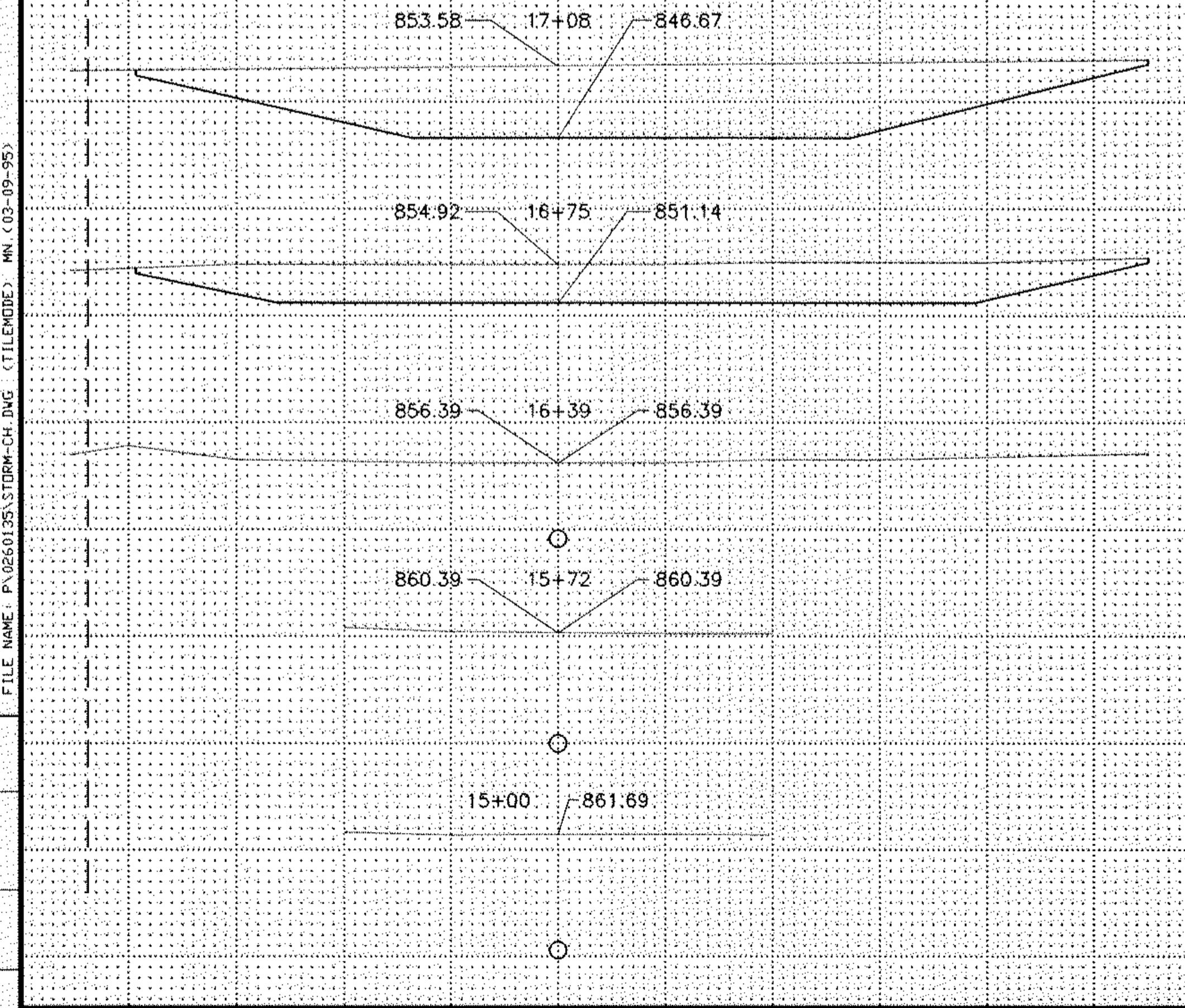
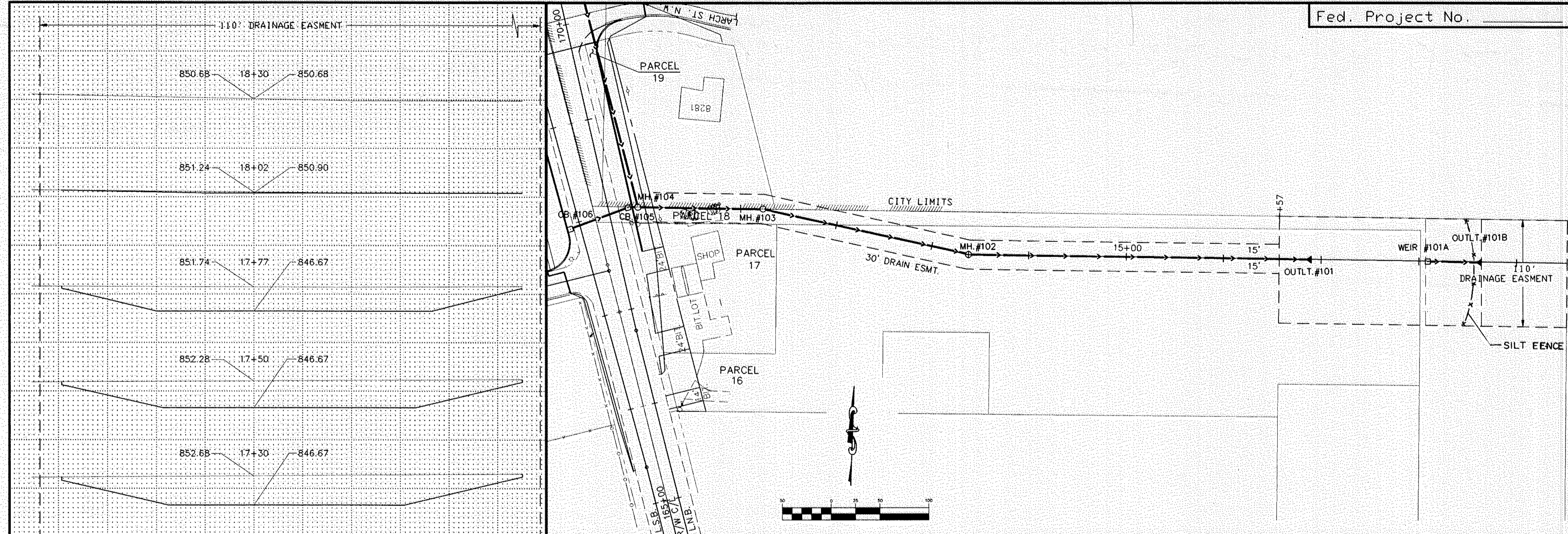
| REVISIONS | BY | DATE |
|-----------|-------|----------|
| 1 | K. J. | 07-05-95 |

**STORM SEWER
LATERALS**



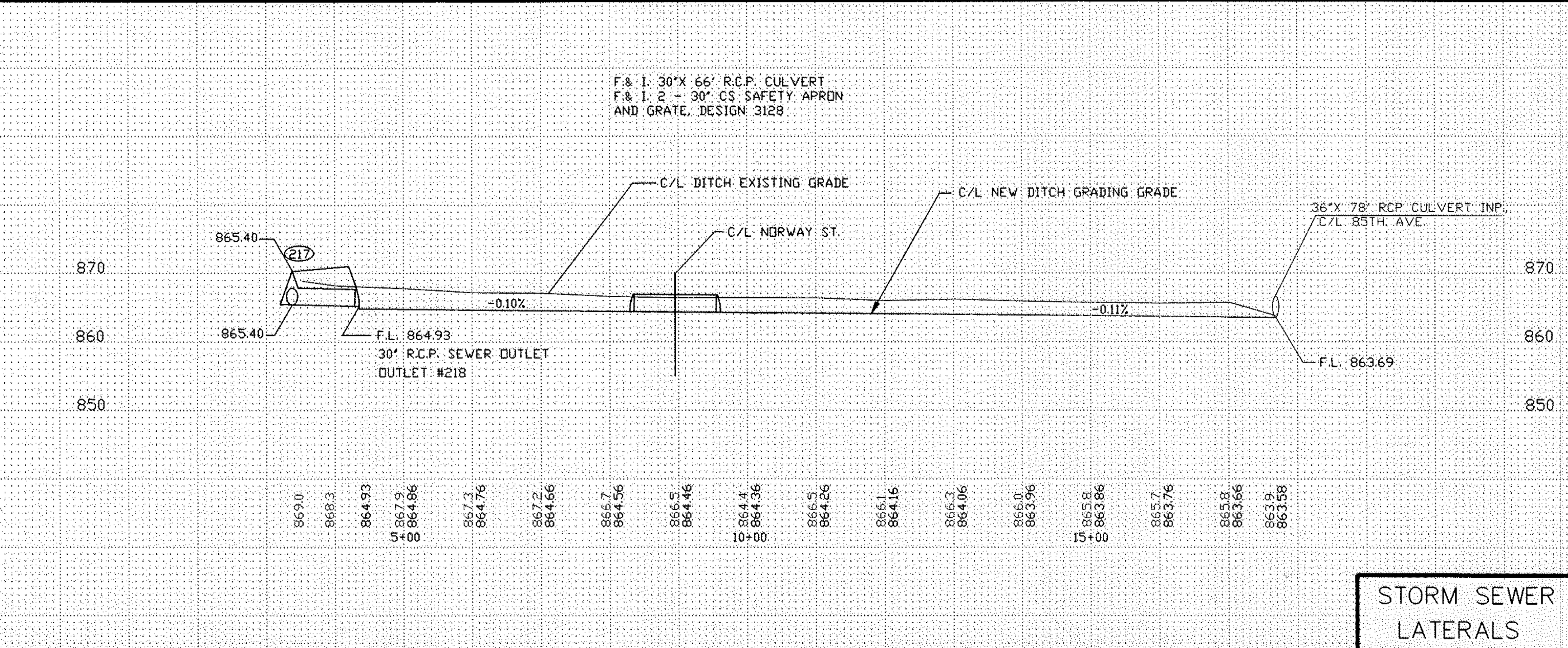
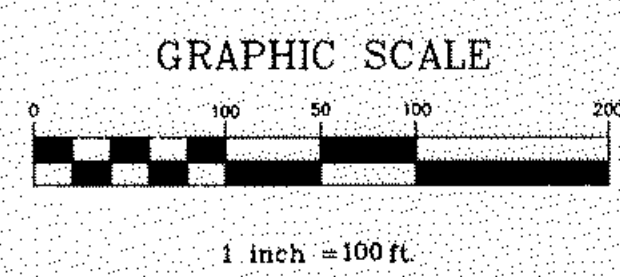
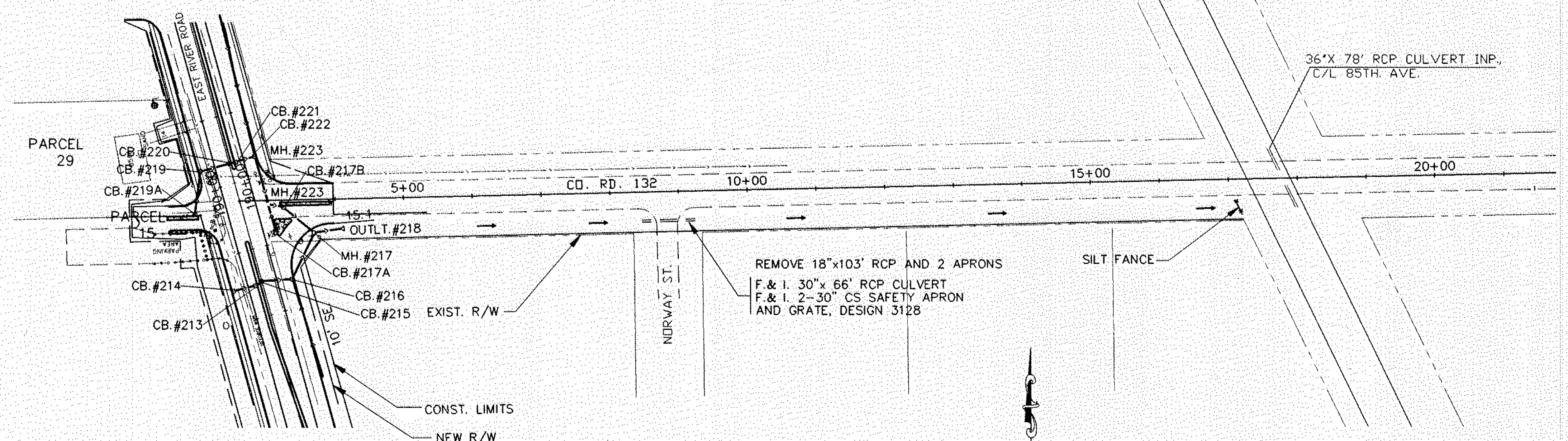
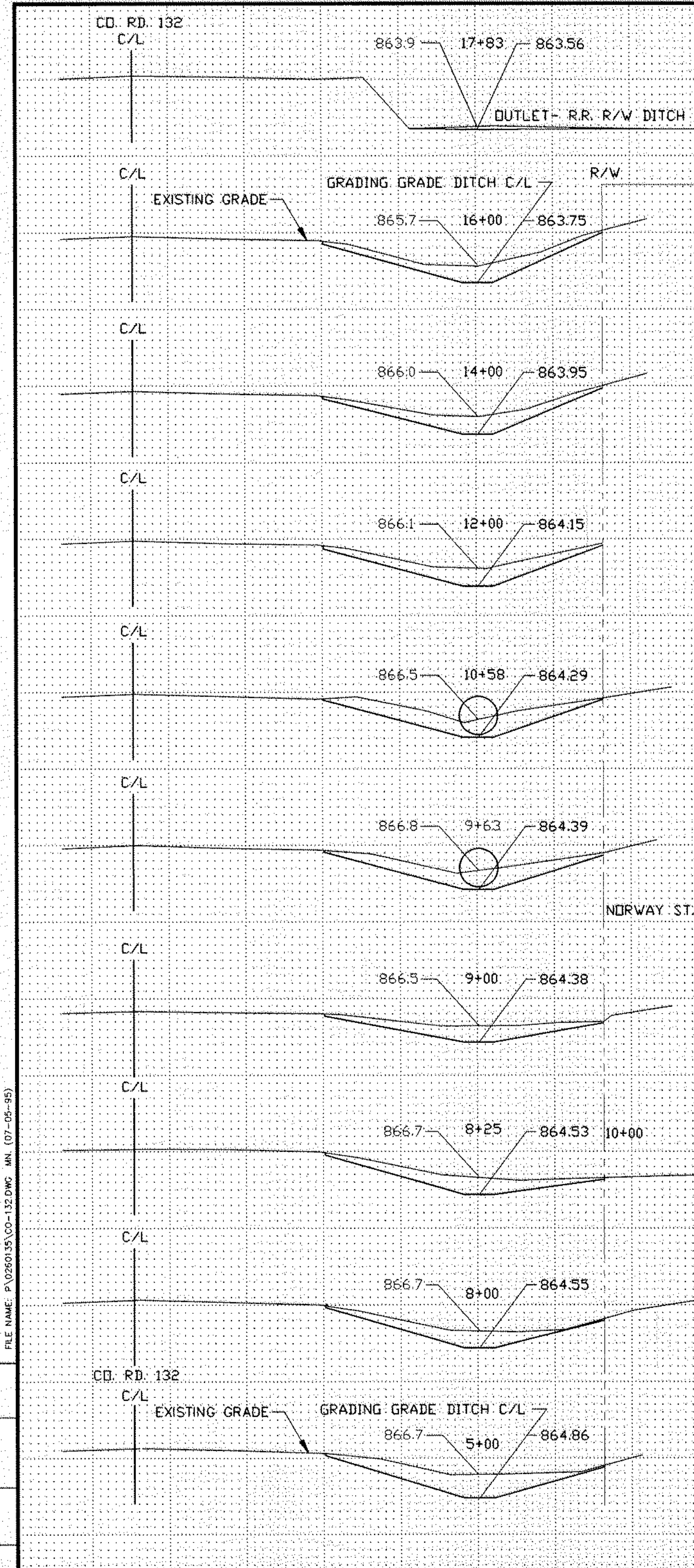
| REVISIONS | BY | DATE |
|-----------|----|----------|
| 1 | K | 07-05-95 |

STORM SEWER LATERALS



| REVISIONS | DATE | BY |
|-----------|----------|-------|
| 1 | 07-05-95 | K. J. |

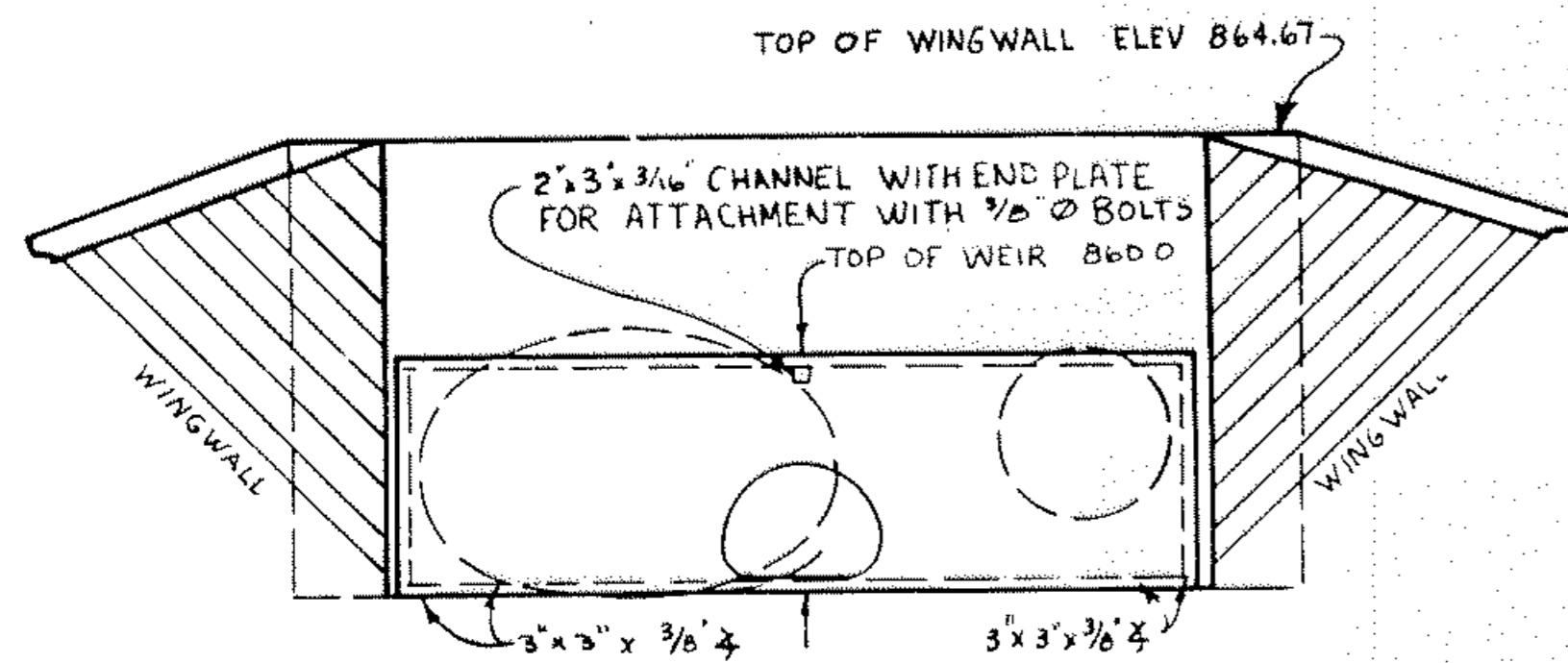
STORM SEWER LATERALS



FILE NAME: P:\0260135\CO-132.DWG MM. (07-05-95)

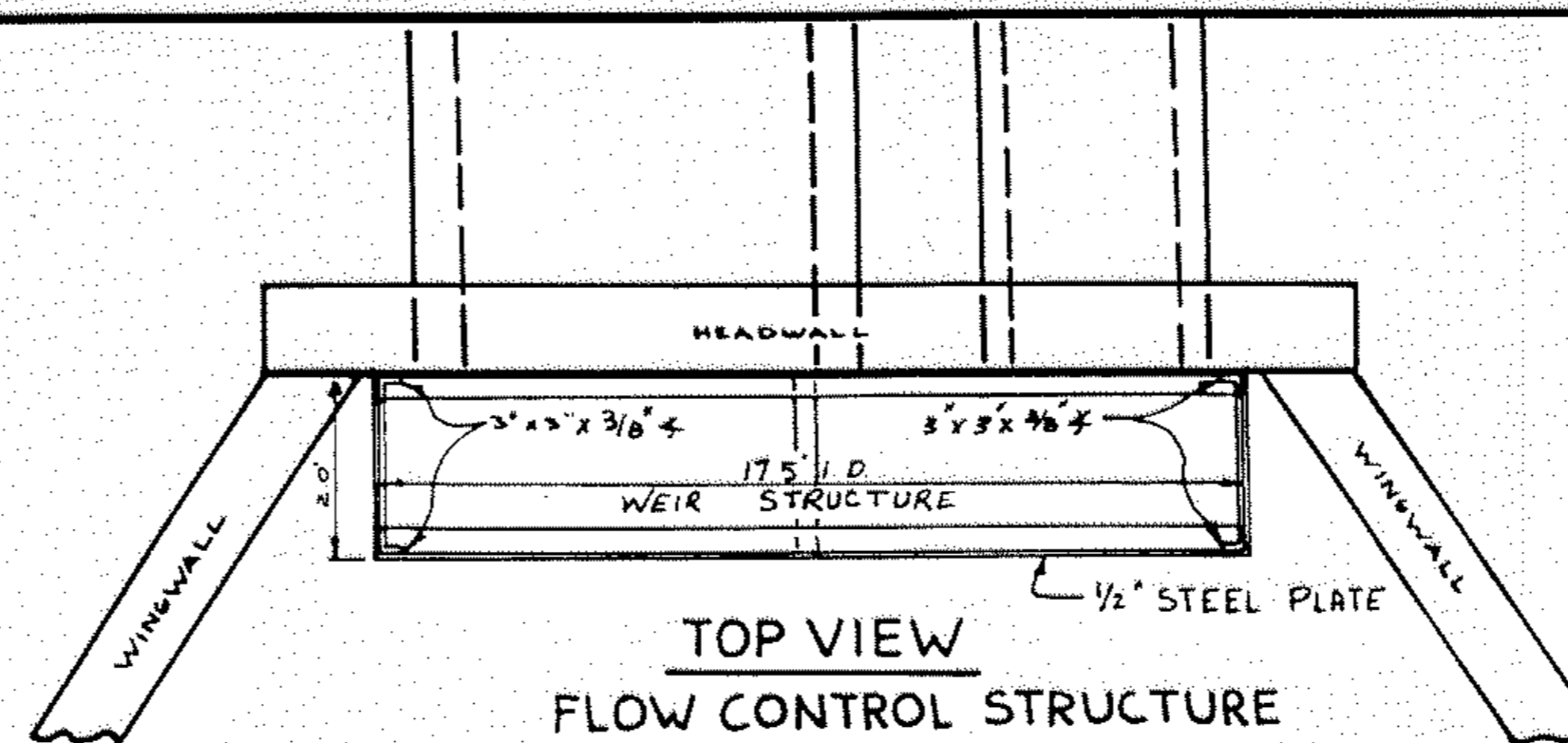
| REVISIONS | DATE | BY |
|-----------|----------|------|
| | 07-05-95 | K.J. |

**STORM SEWER
LATERALS**

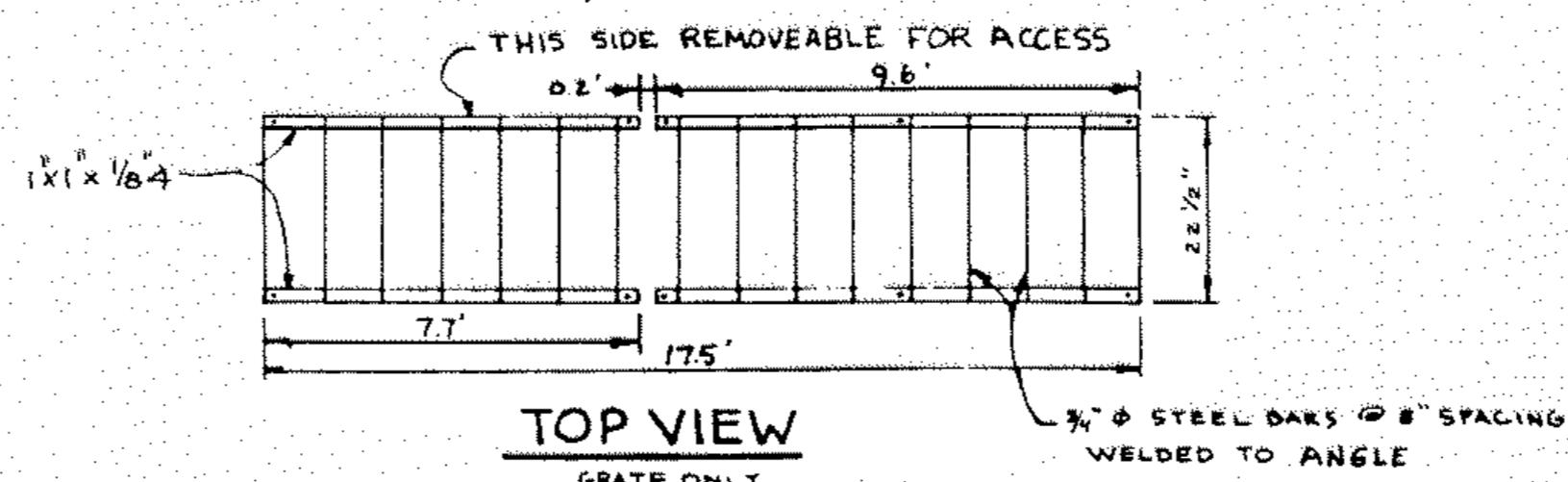


FRONT VIEW
FLOW CONTROL STRUCTURE

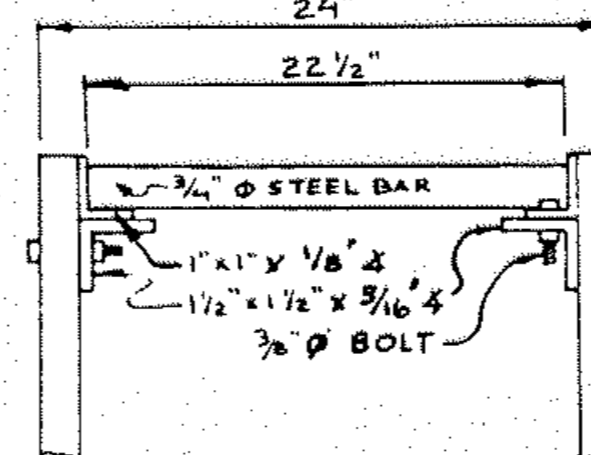
NO SCALE



TOP VIEW
FLOW CONTROL STRUCTURE

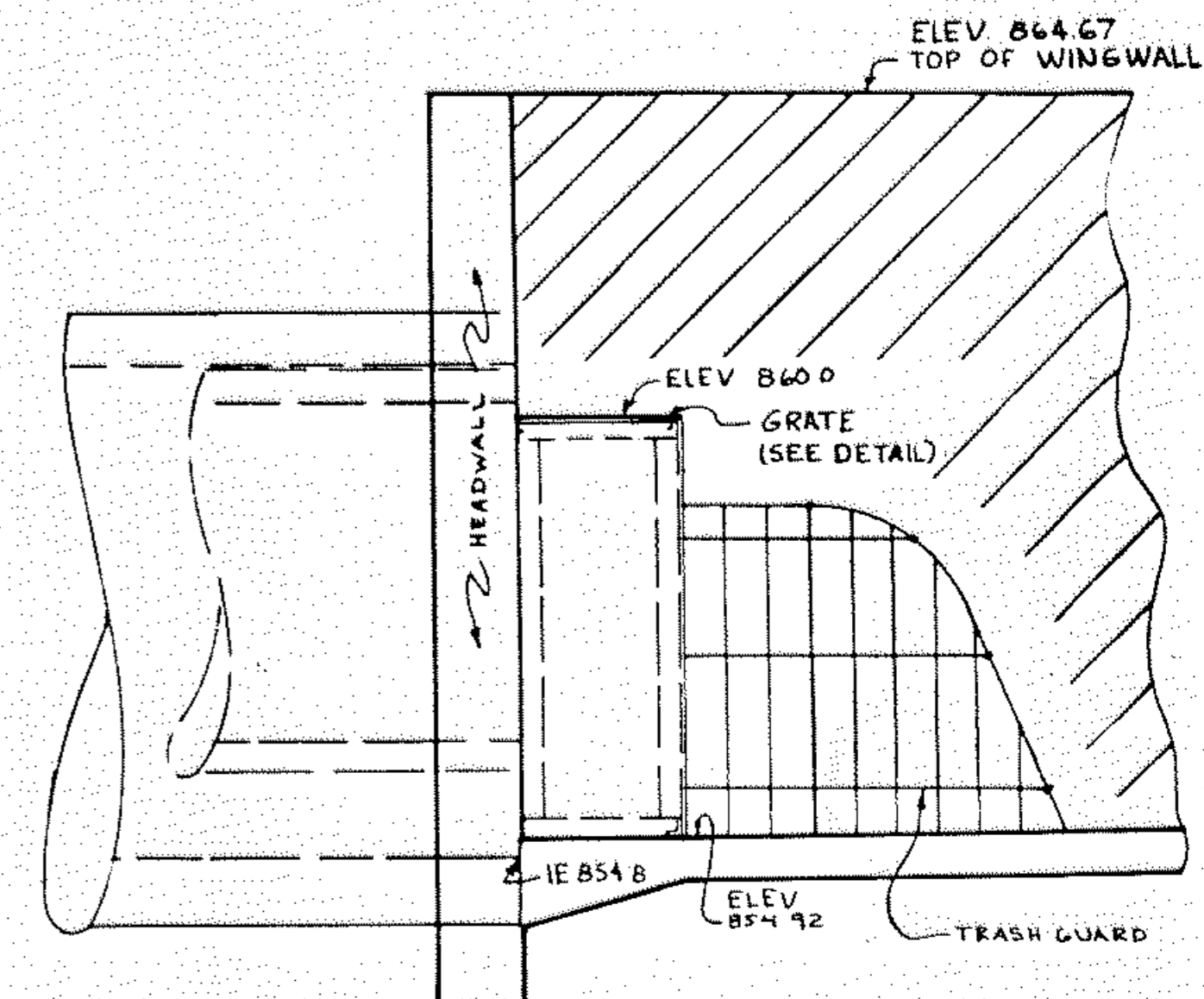


TOP VIEW
GRATE ONLY

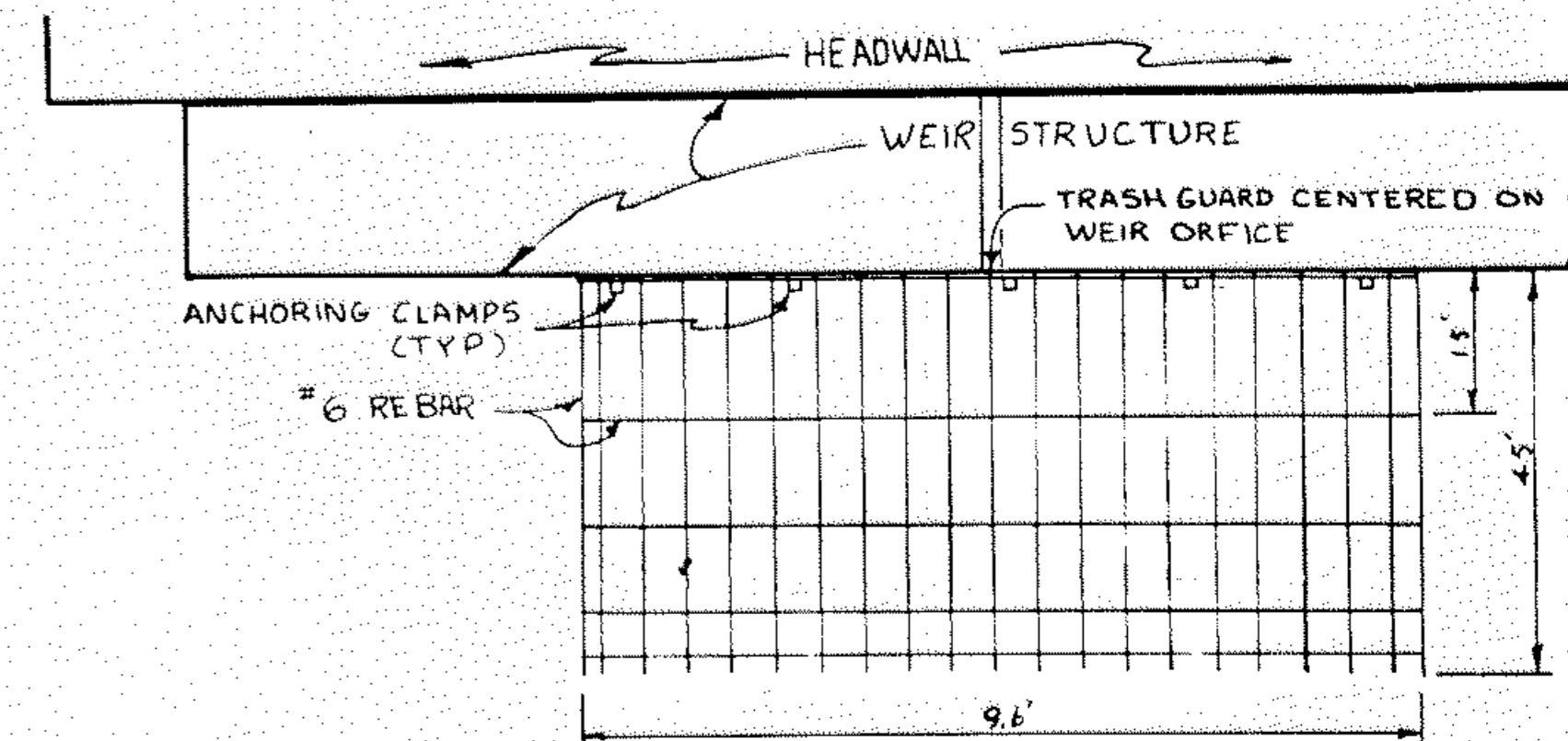


SIDE VIEW
GRATE DETAIL

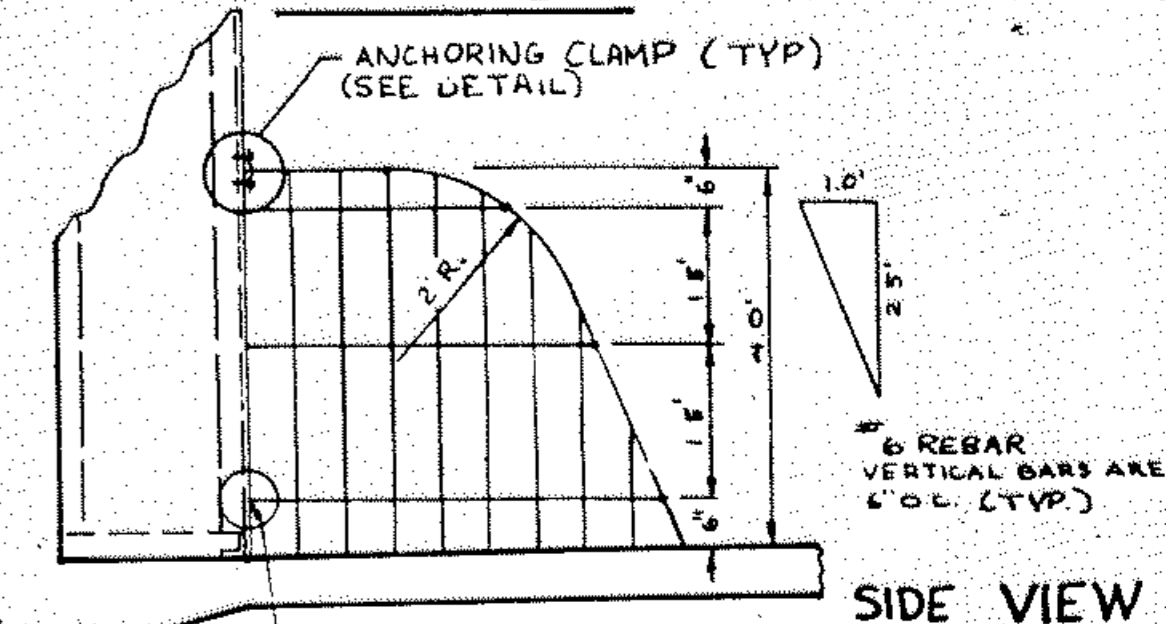
NO SCALE



SIDE VIEW
FLOW CONTROL STRUCTURE

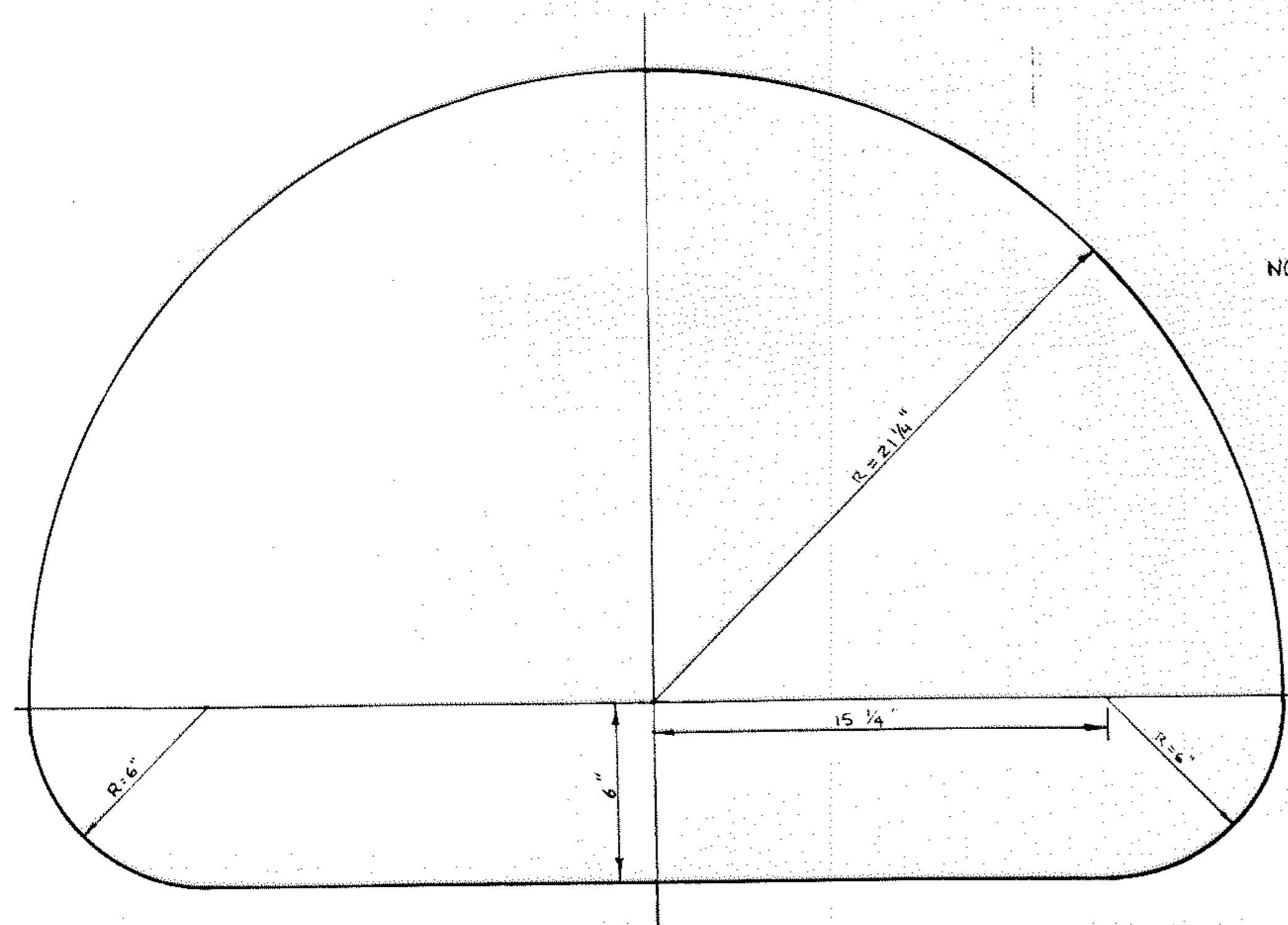


TOP VIEW



SIDE VIEW

TRASH GUARD DETAIL
(NO SCALE)



ORFICE DETAIL

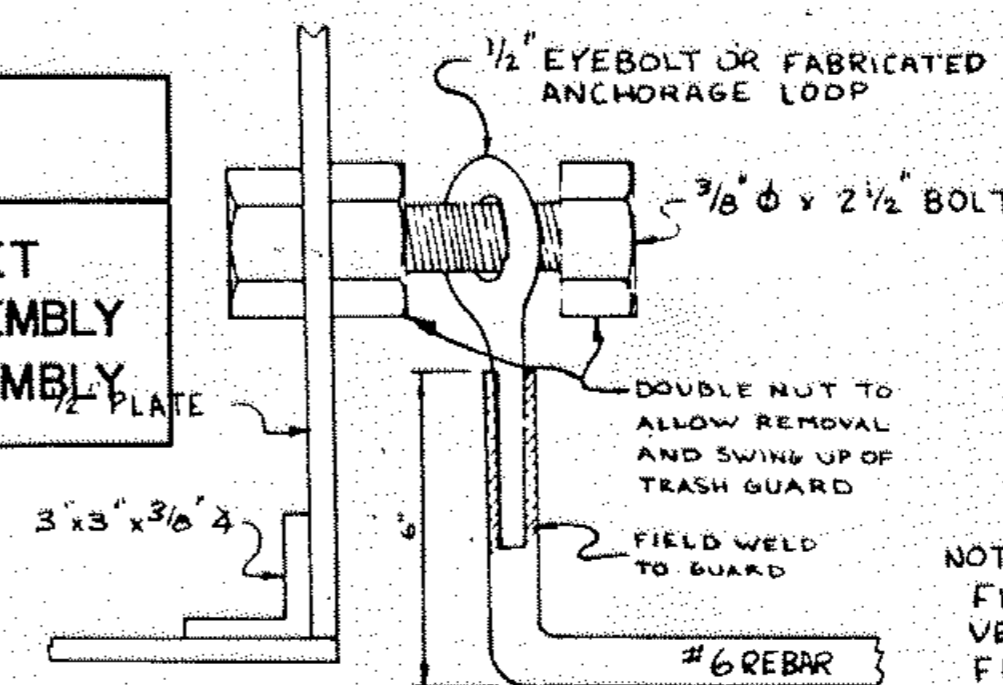
NO SCALE

NOTES

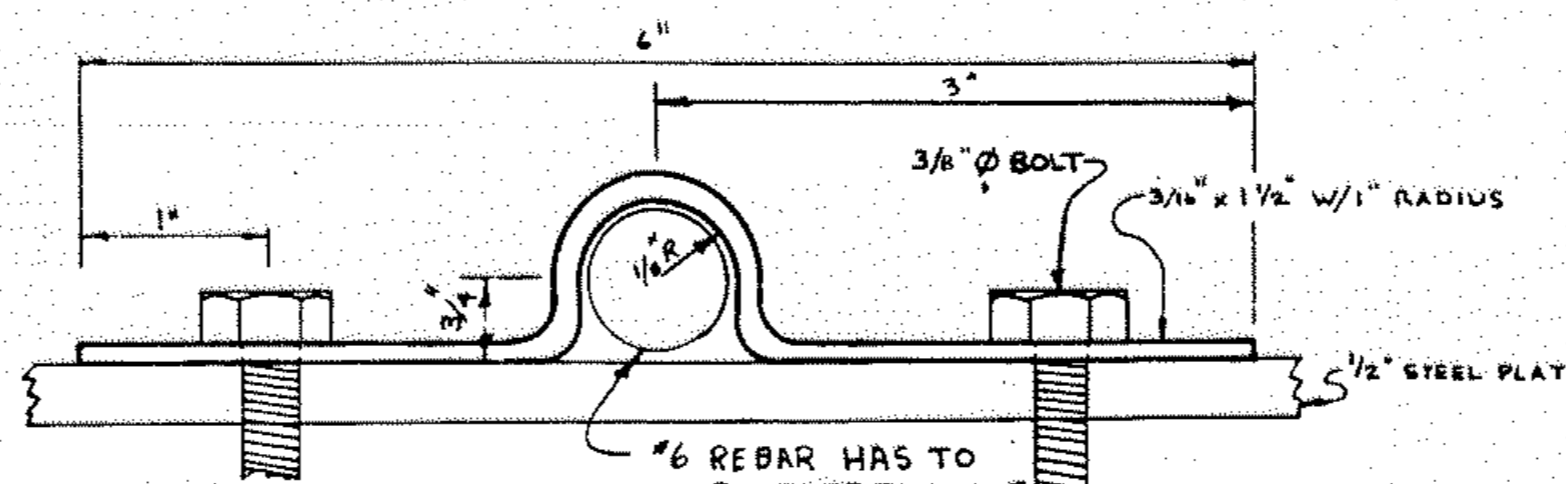
- 1 PRIOR TO SUBMITTING SHOP DRAWINGS ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- 2 ALL JOINTS WILL BE BOLTED WITH 3/8" Ø BOLTS SPACED 16" OC (TYP)
- 3 EXISTING WINGWALLS SHALL BE RESTORED WHERE THEY ARE CHIPPED OUT NEAR THE HEADWALL
- 4 WEIR STRUCTURE SHALL BE ANCHORED WITH 3/8" Ø BOLTS ANCHORED INTO EXISTING CONCRETE STRUCTURE WITH 3/8" x 3" "DIAMOND SUP-R-STUD DROP IN WEDGE ANCHORS" OR EQUAL.

FOR INFORMATION ONLY

PAY ITEMS ASSOCIATED WITH THIS SHEET
2104.523 SALVAGE WEIR/TRASH GUARD ASSEMBLY
0506.602 INSTALL WEIR/TRASH GUARD ASSEMBLY



ANCHORAGE DETAIL
TOP VIEW



TYPICAL ANCHORING CLAMP

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the State of Minn. Statutes Sections 326.02 to 326.16.

Date 7/24/92 Minn. Reg. No. 12699

BRW

DESIGN BY T.L.H.
DRAWN BY C.D.S.

S.A.P. NO.

ORIGINAL DATE
REVISIONS

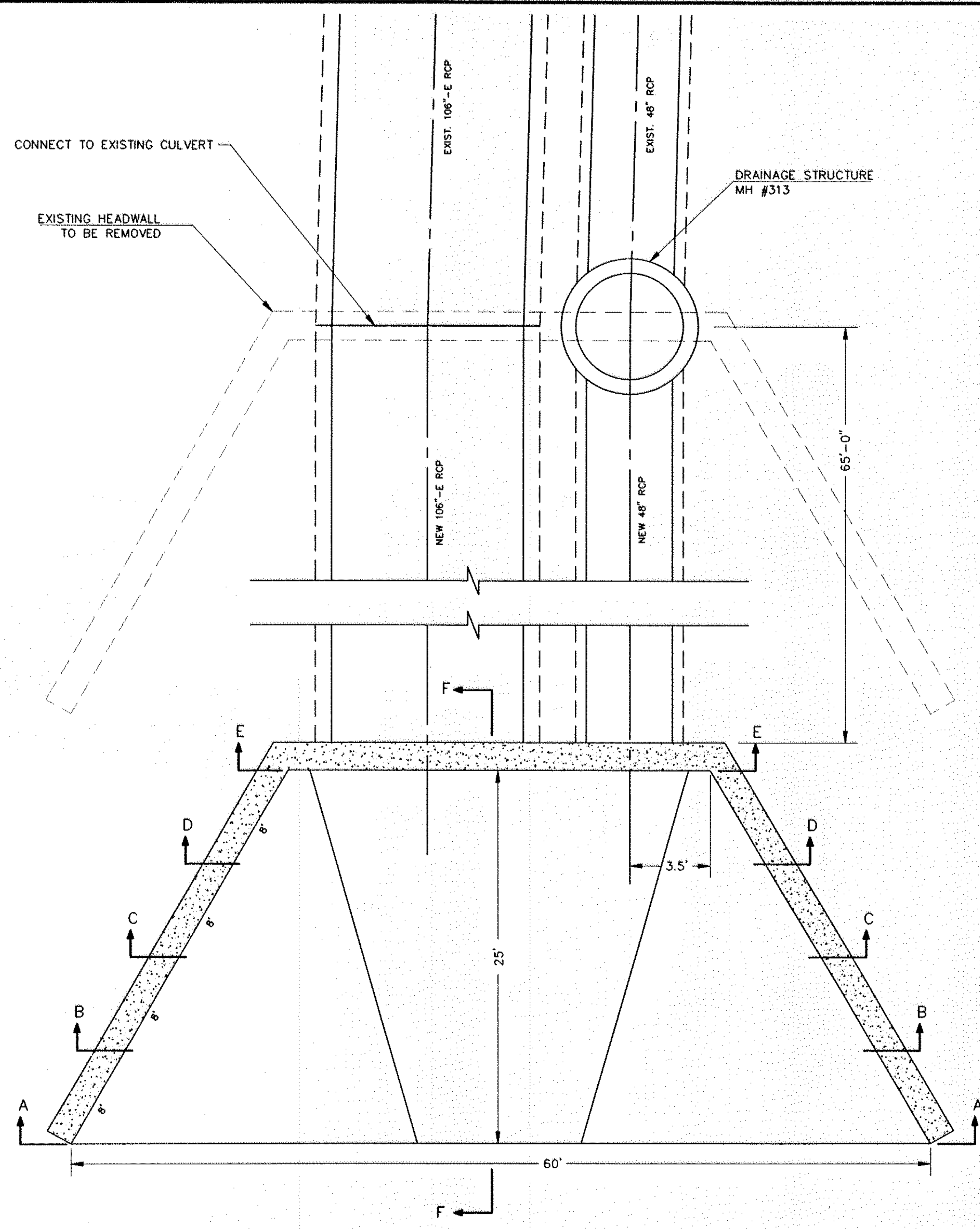
SURVEY BK NO
E 7430

AS-BUILT 12-29-01
J.L.K.

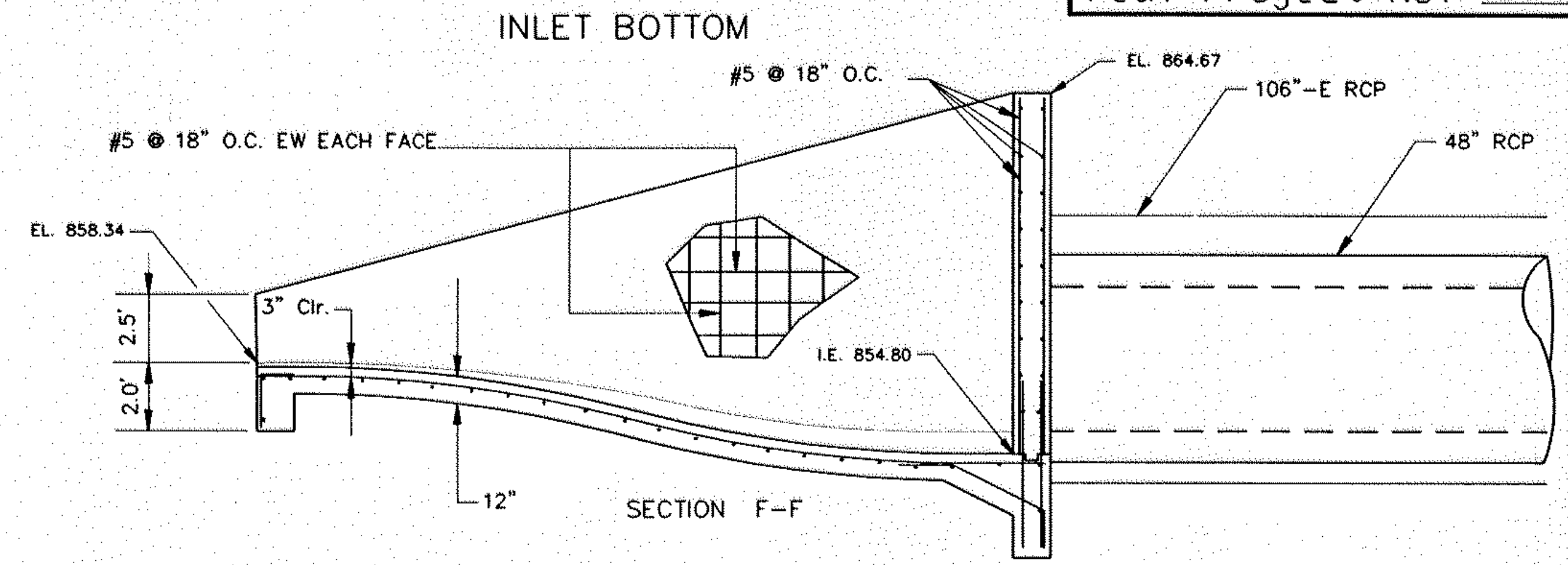
CITY OF COON RAPIDS
IMPROVEMENT PROJECT 79-25
PLEASURE CREEK
CONTROL STRUCTURES
E.R.R. STRUCTURE DETAILS

SHEET 7 OF 7

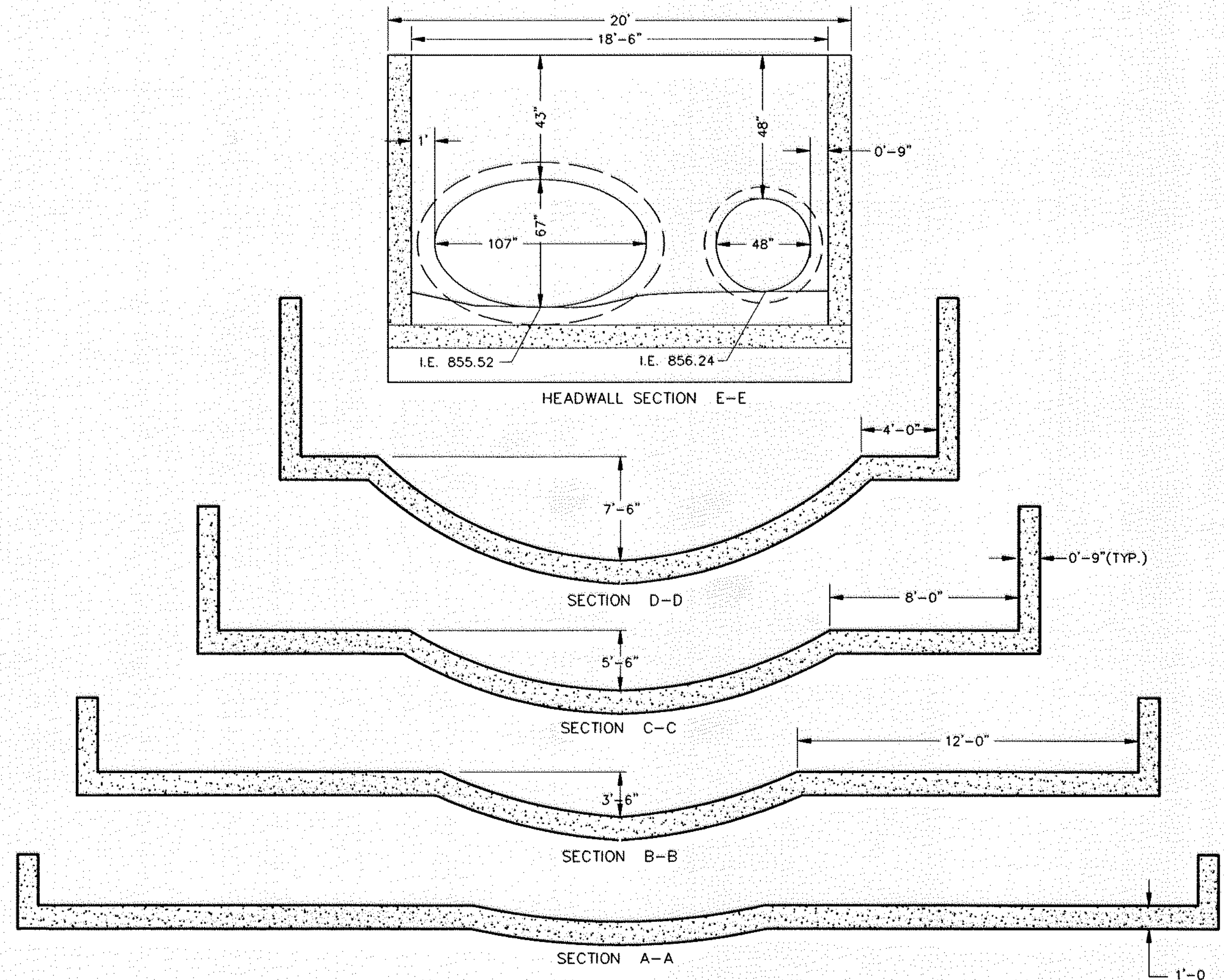
DESIGN FILE
NA 16-8005



INLET PLAN VIEW



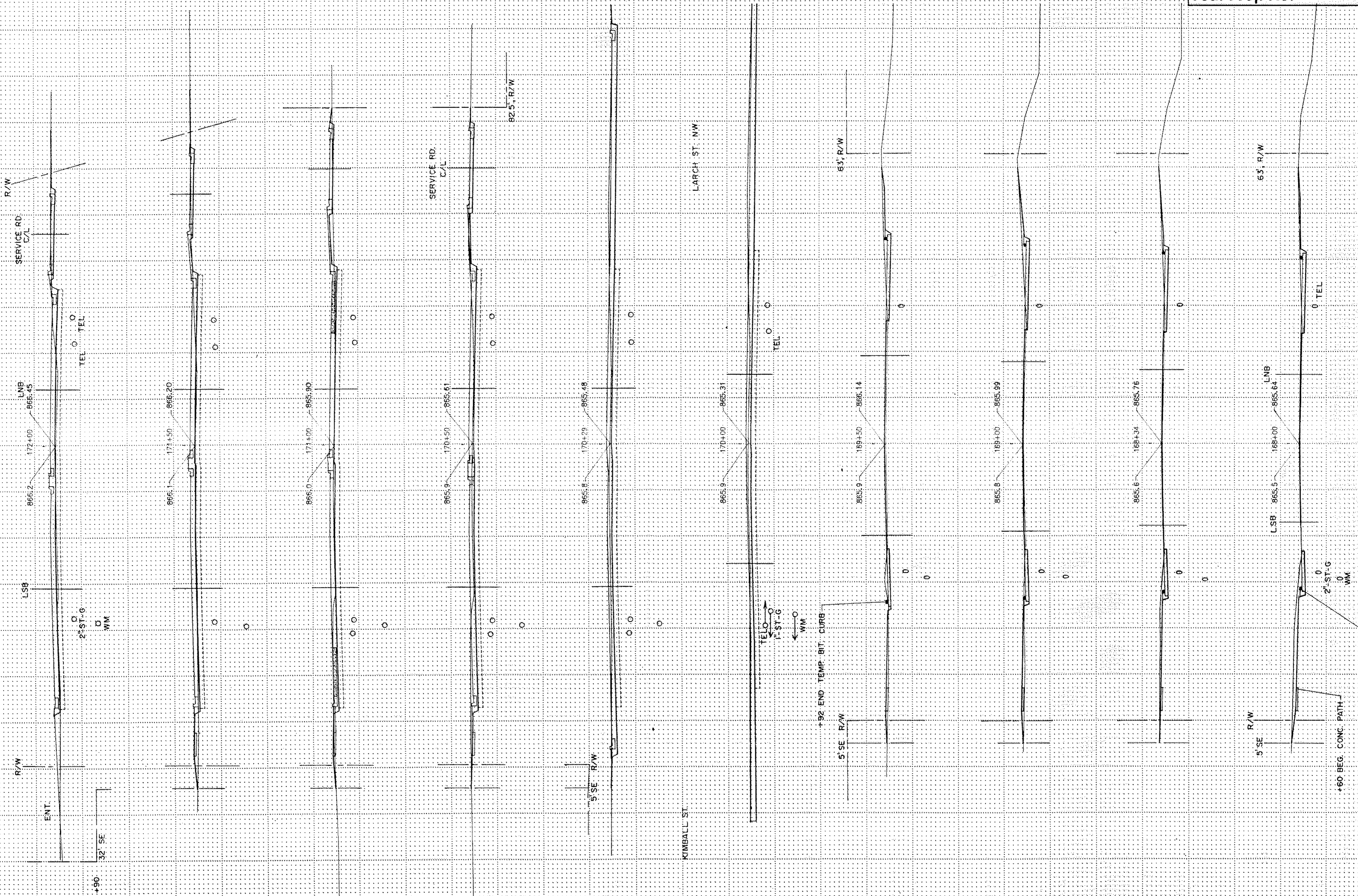
INLET HEADWALL DETAIL



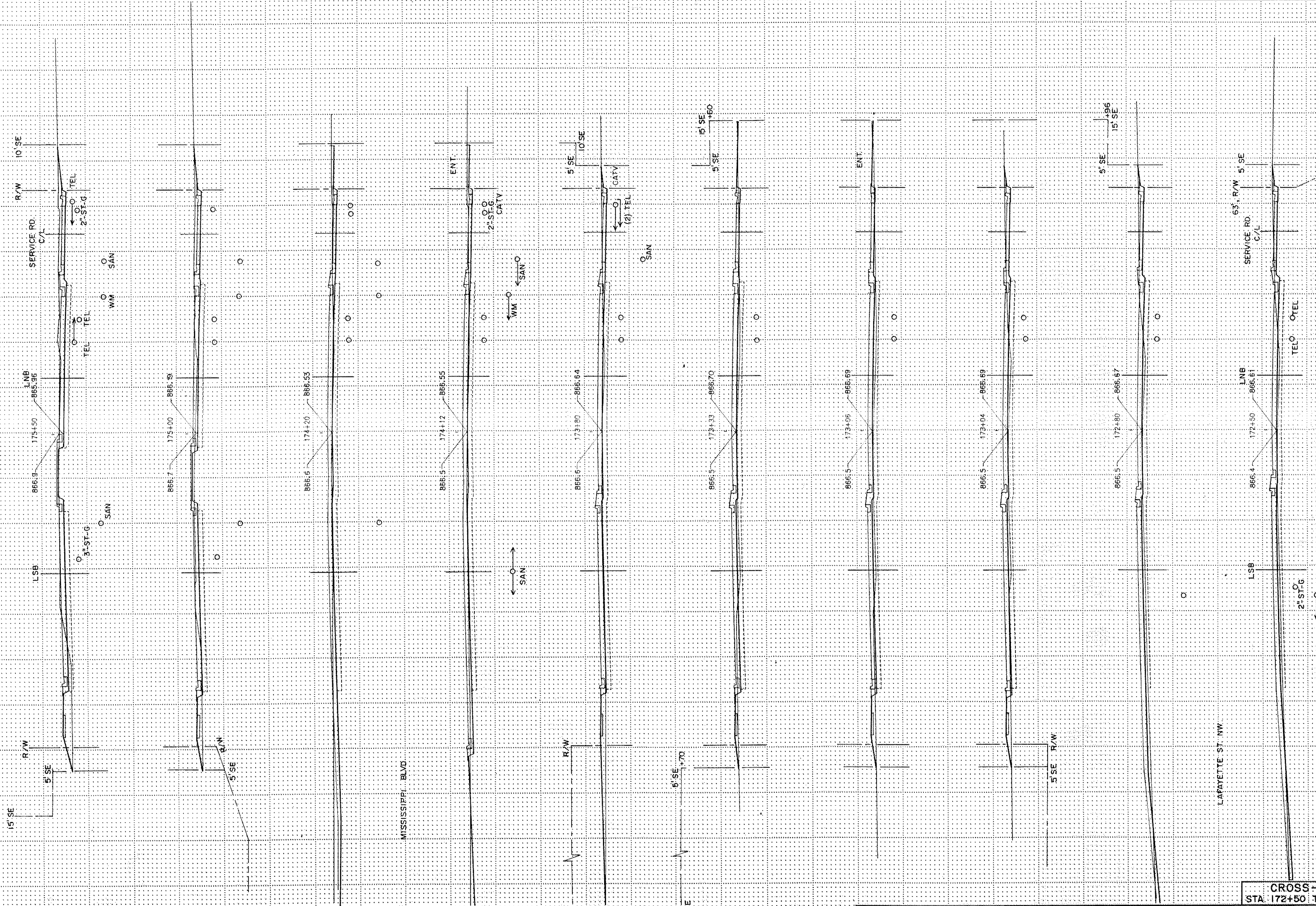
PLEASURE CREEK CONTROL STRUCTURE DETAILS

| REVISIONS | DATE | BY |
|-----------|------|----|
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| | | |

Copy Equipment Form #1 R155557

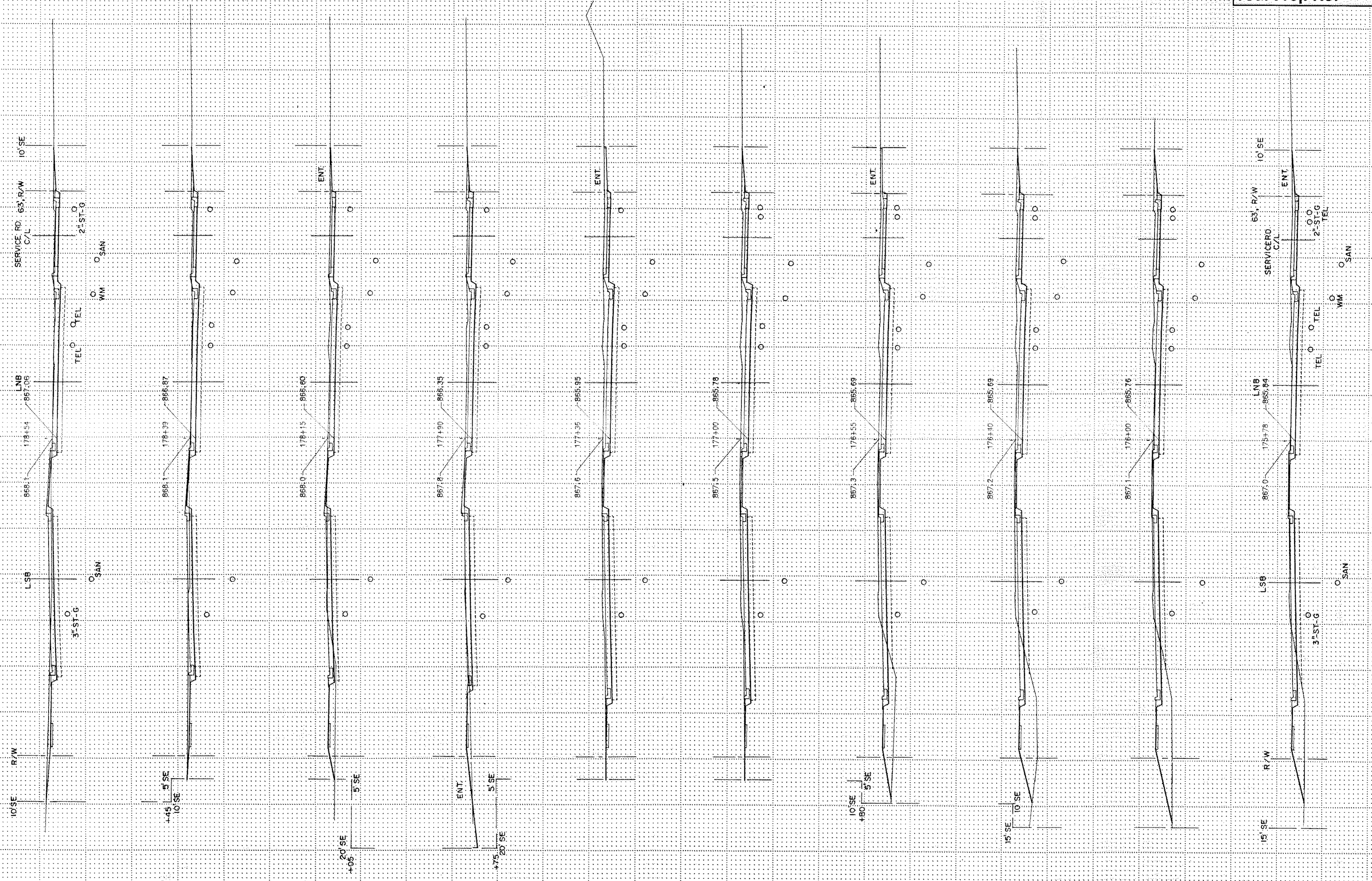


CROSS-SECTION
STA. 168+00 TO STA. 172+00

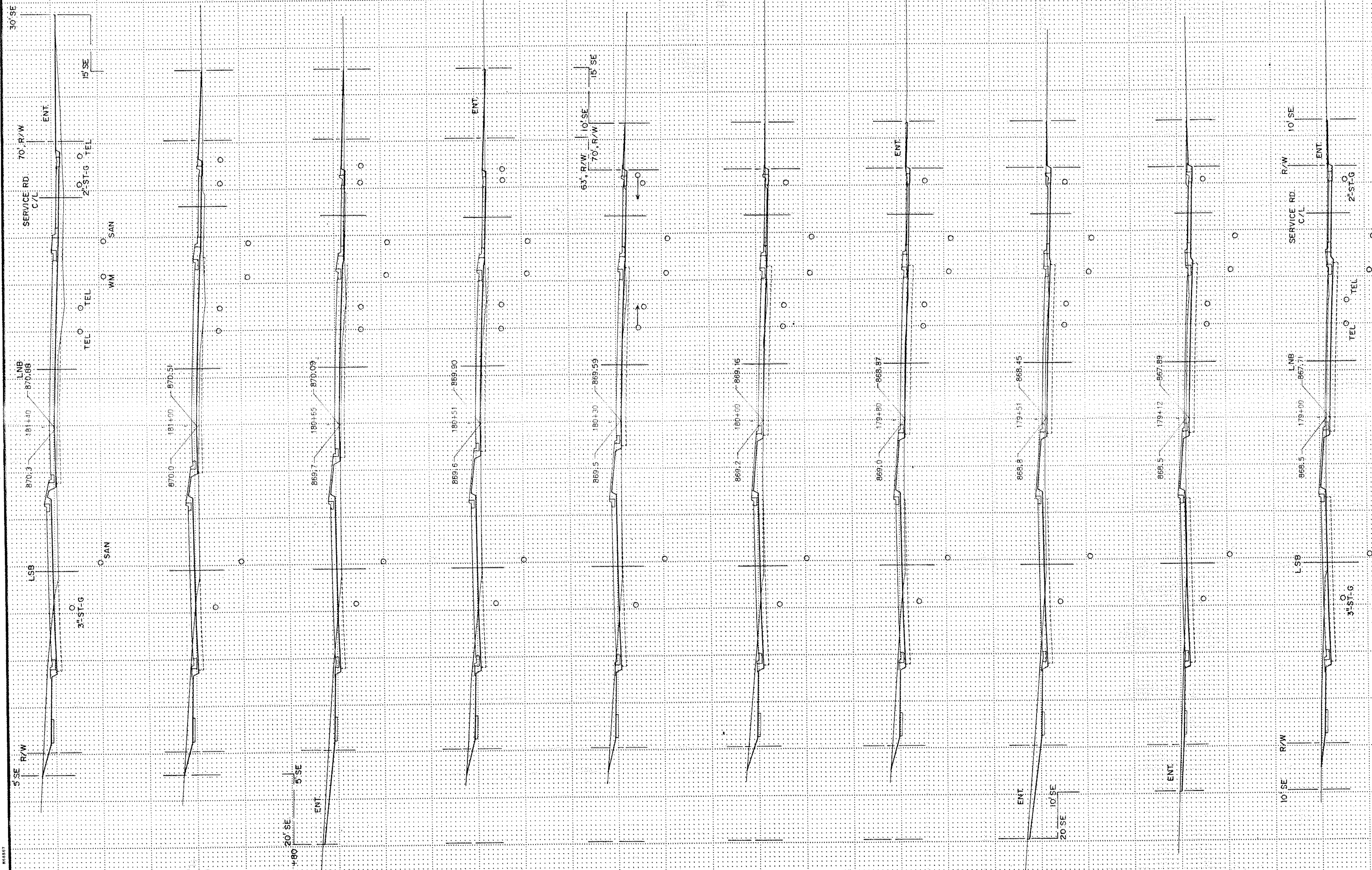


CROSS SECTION
STA: 172+50 TO STA: 175+50

City Equipment Form #1 858857



CROSS SECTION
STA: 175+78 TO STA: 178+54



Copy Equipment Form #1

CROSS-SECTION
STA: 179+00 TO STA: 181+40

84 TH. LANE NW

LNB
870.53
184+40

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
870.68
184+27

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
870.79
184+00

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
870.99
183+50

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

SERVICE RD.
C/L

LNB
871.15
183+10

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
871.19
183+00

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
871.28
182+57

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
871.26
182+15

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
871.22
182+00

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

LNB
870.97
181+52

LSB

R/W

20' SE

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

2" ST-G

TEL

TEL

3" ST-G

5' SE

20' SE

+15

SAN

WIN

SAN

WIN

SAN

WIN

+50 END RET. WALL

+65 BEG. RET. WALL

+50 END RET. WALL

+65 BEG. RET. WALL

10' SE

5' SE

ENT.

10' SE

5' SE

10' SE

5' SE

10' SE

5' SE

10' SE

5' SE

ENT.

5' SE

5' SE

5' SE

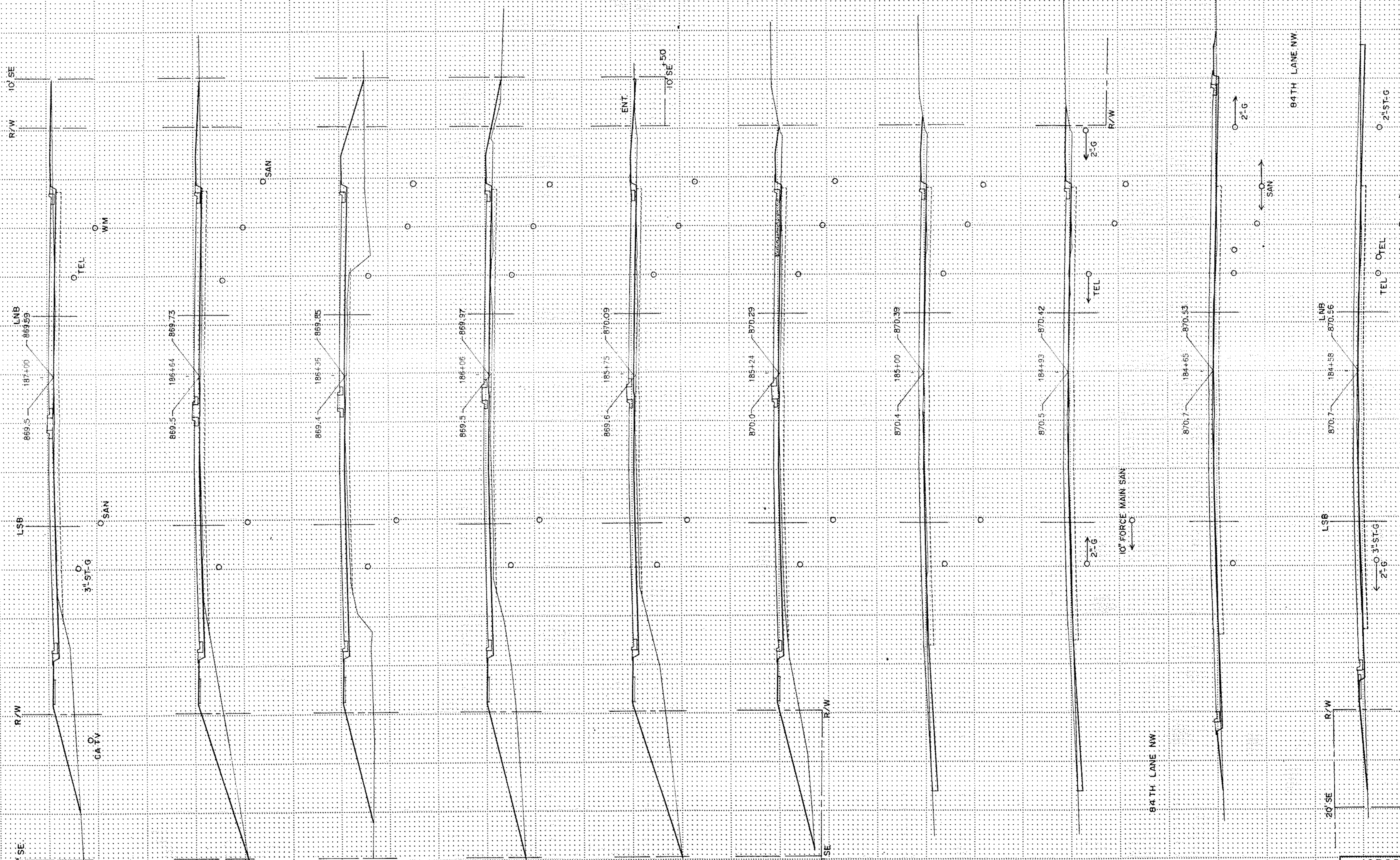
5' SE

5' SE

5' SE

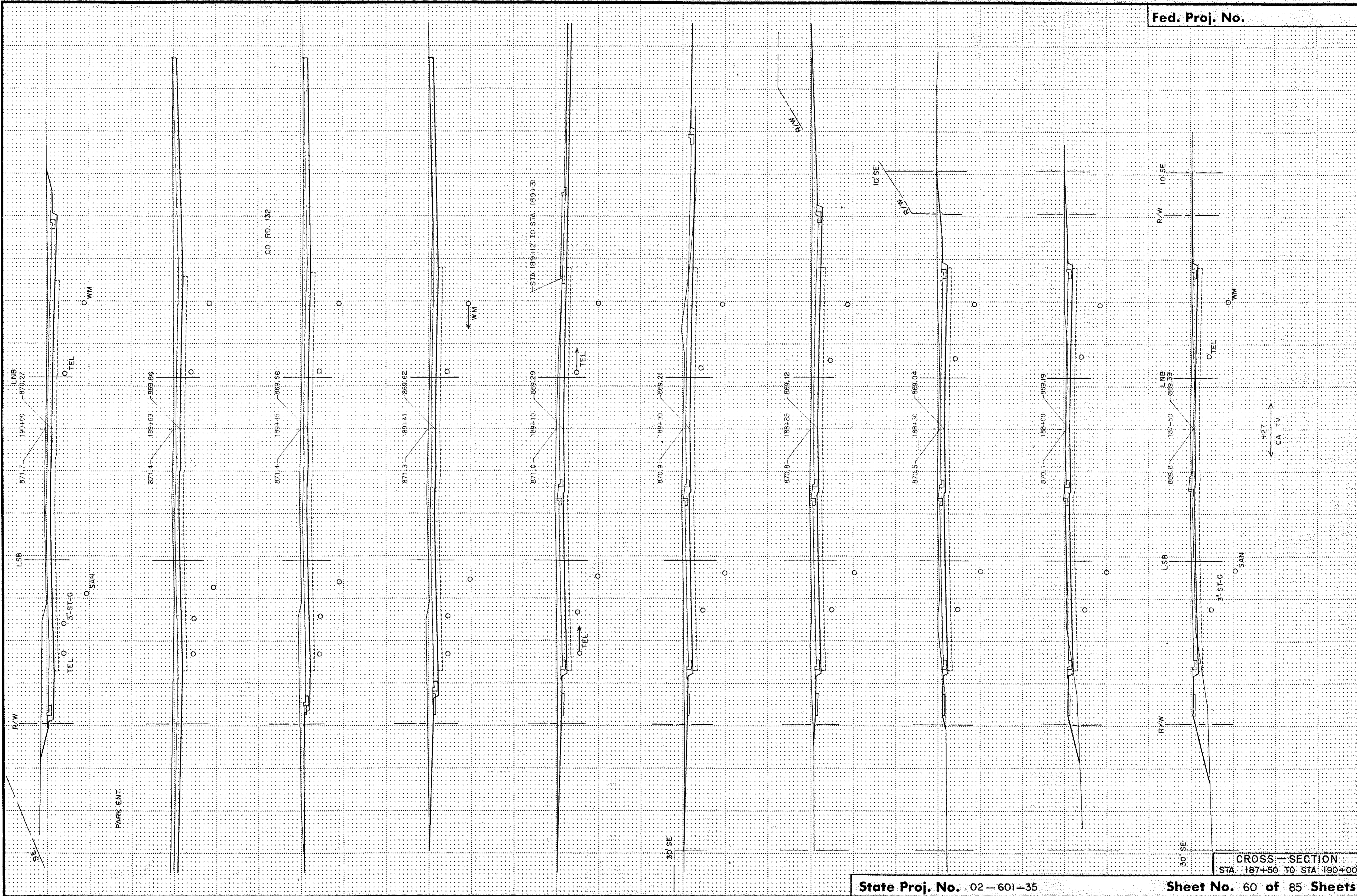
5' SE

Copy Equipment Form #1 MARSZT



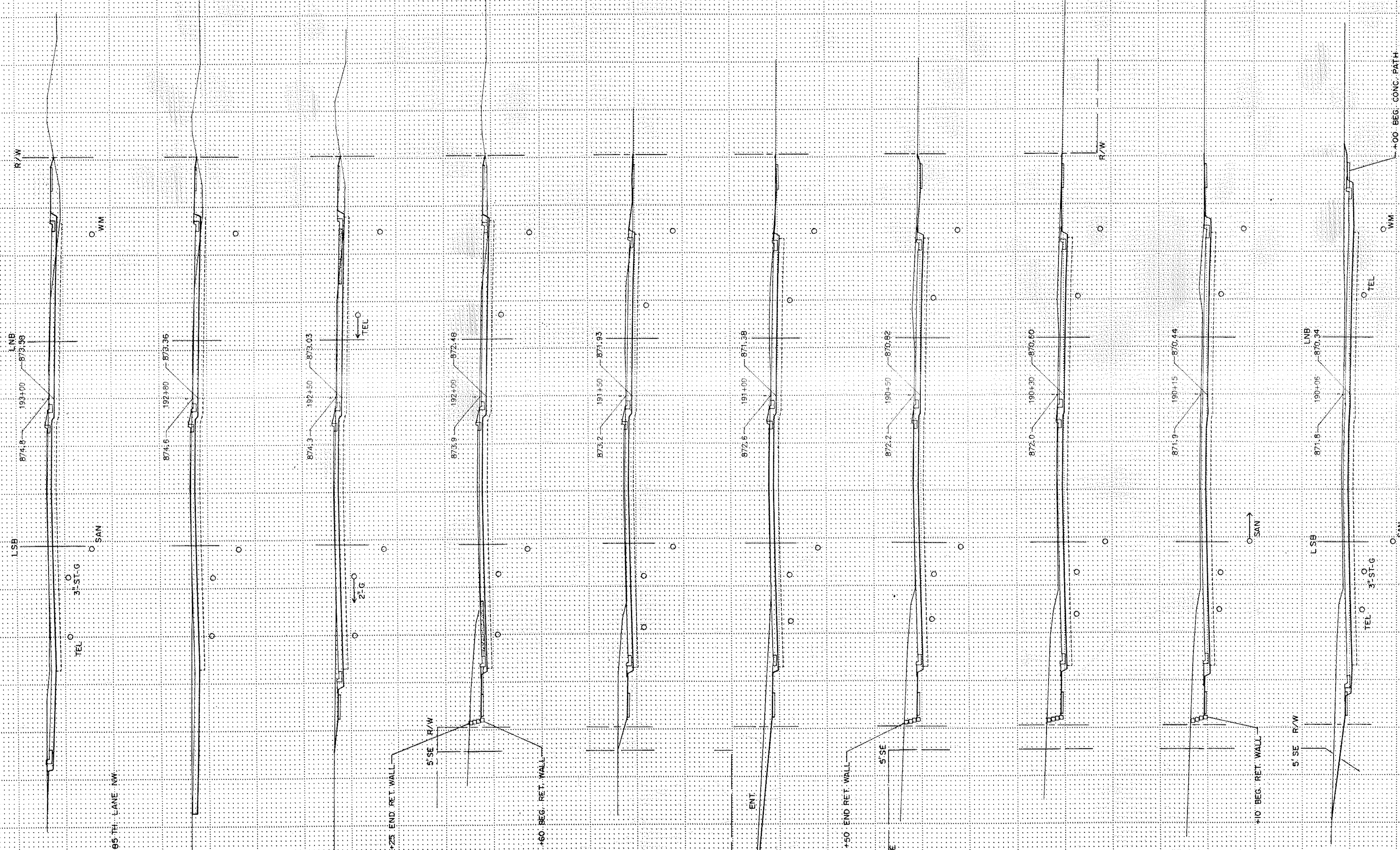
CROSS SECTION
STA. 184+58 TO STA. 187+00

City Equipment Form #1 868857



CROSS-SECTION
STA. 187+50 TO STA. 190+00

Copy Equipment Form #1 8/83/87



65 TH. LANE NW

+25 END RET. WALL

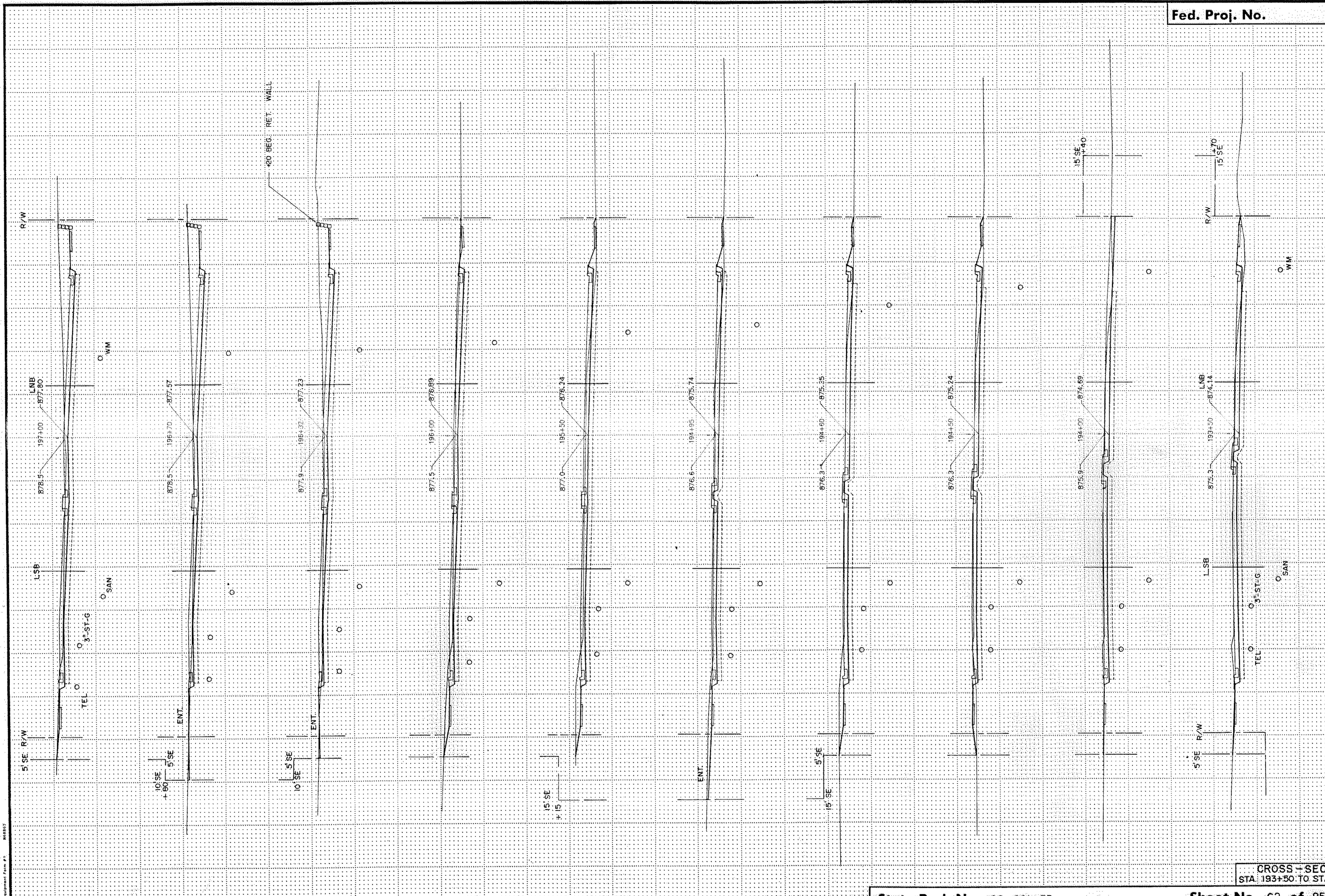
+60 BEG. RET. WALL

ENT.

+50 END RET. WALL

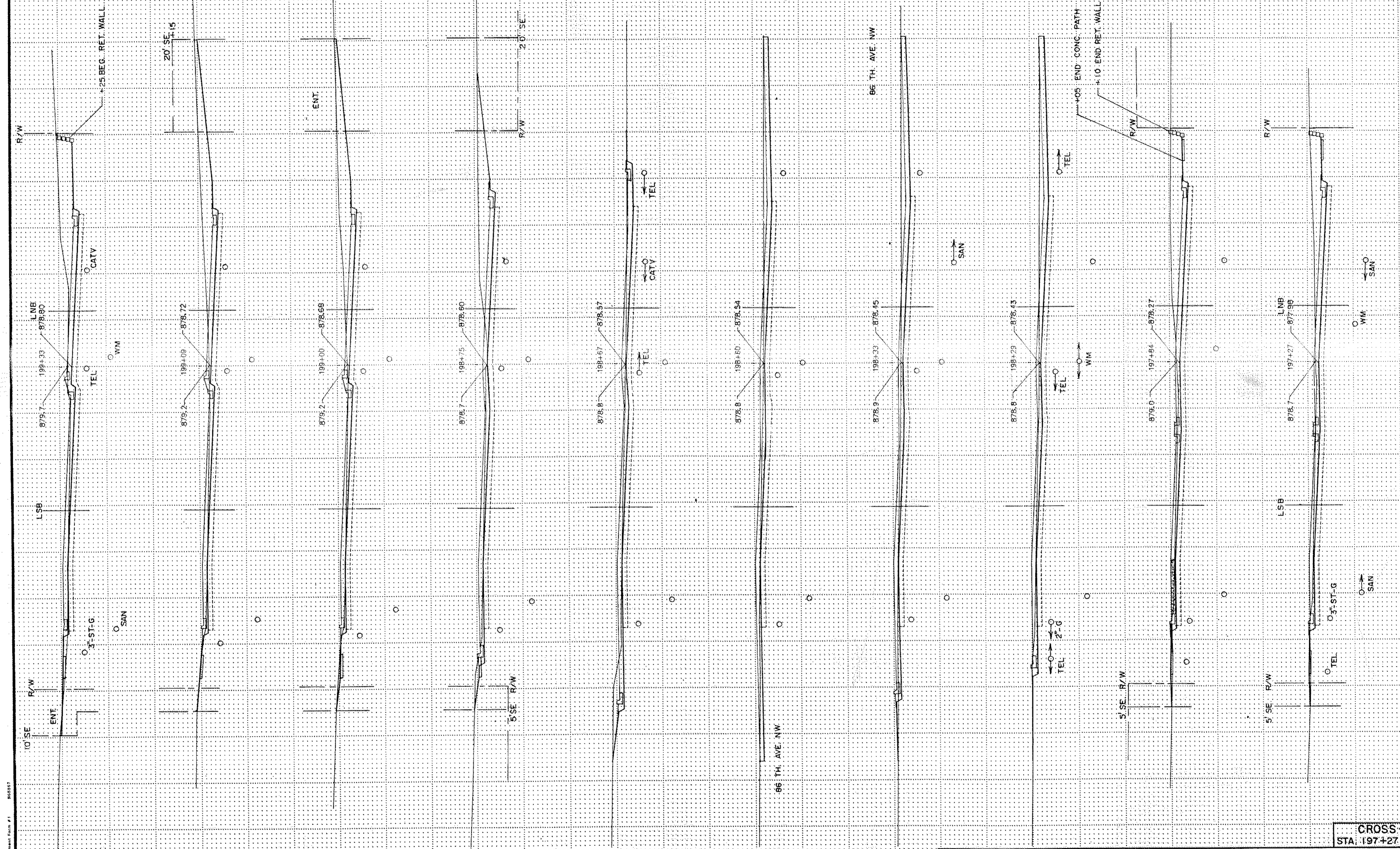
+10' BEG. RET. WALL

CROSS-SECTION
STA: 190+06 TO STA 193+00.



Corp. Equipment Form #1
M-6887

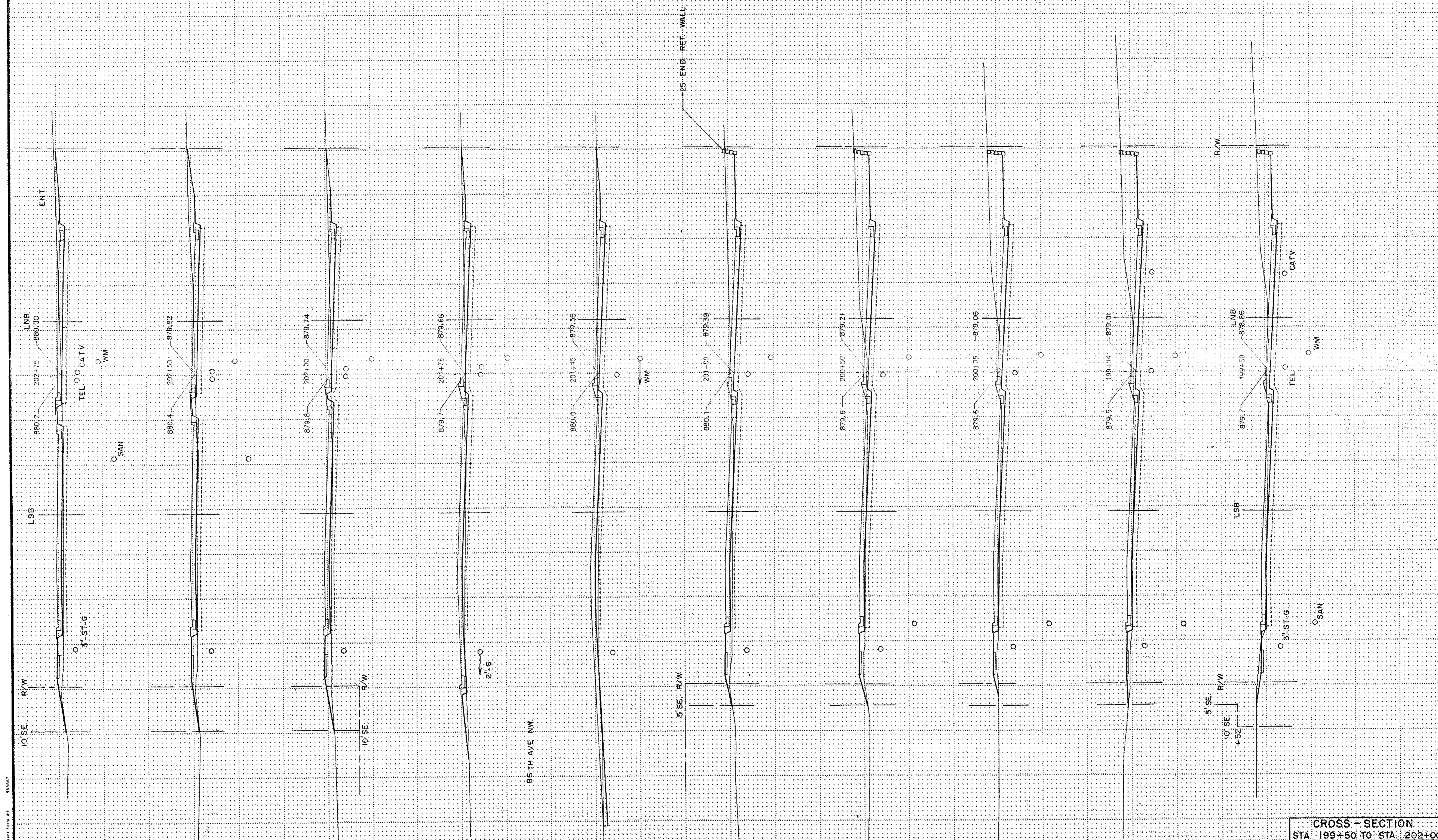
CROSS-SECTION
STA. 193+50 TO STA. 197+00



Copy Equipment Form #1 R6857

CROSS-SECTION
STA: 197+27 TO STA: 199+33

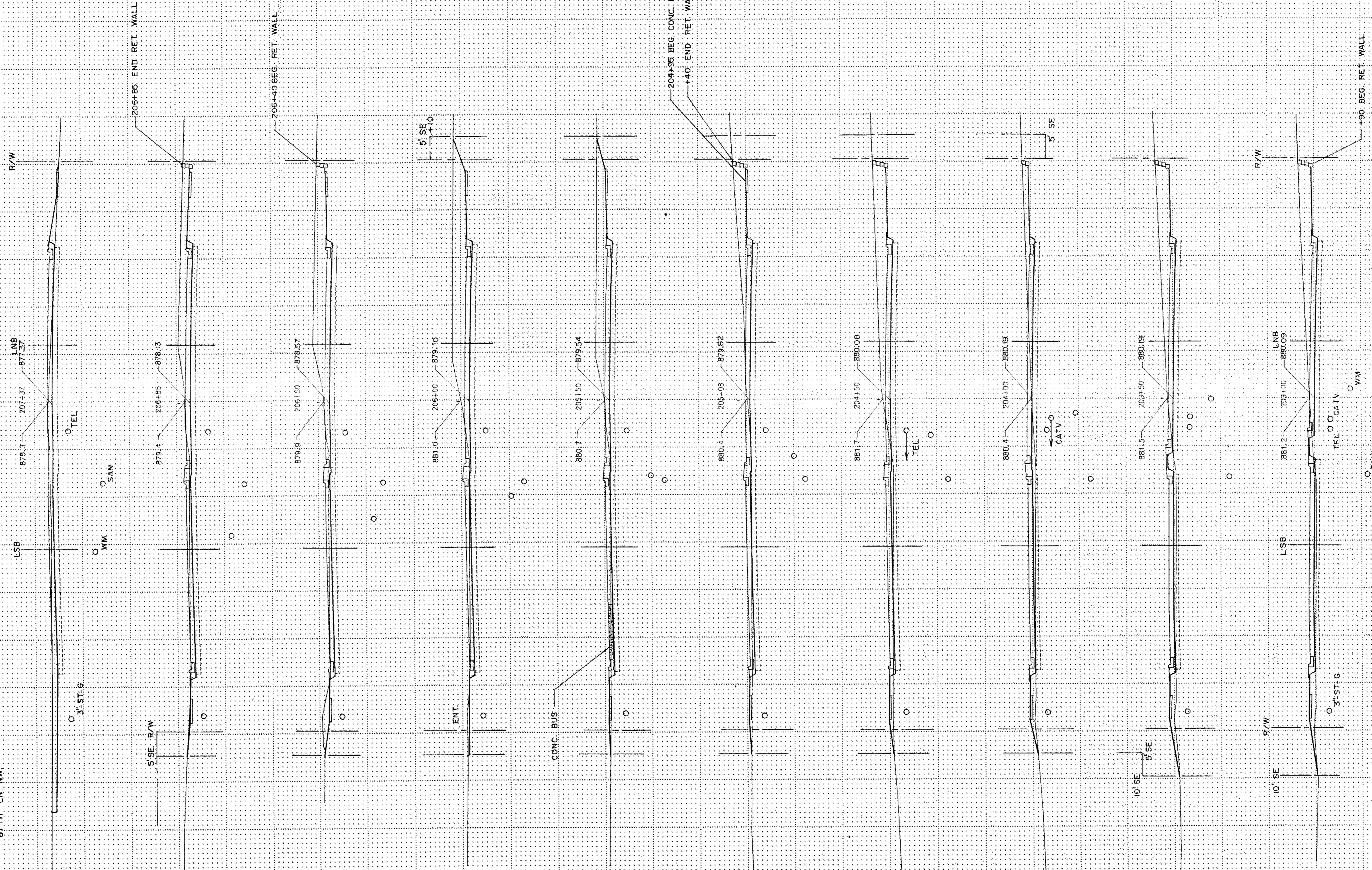
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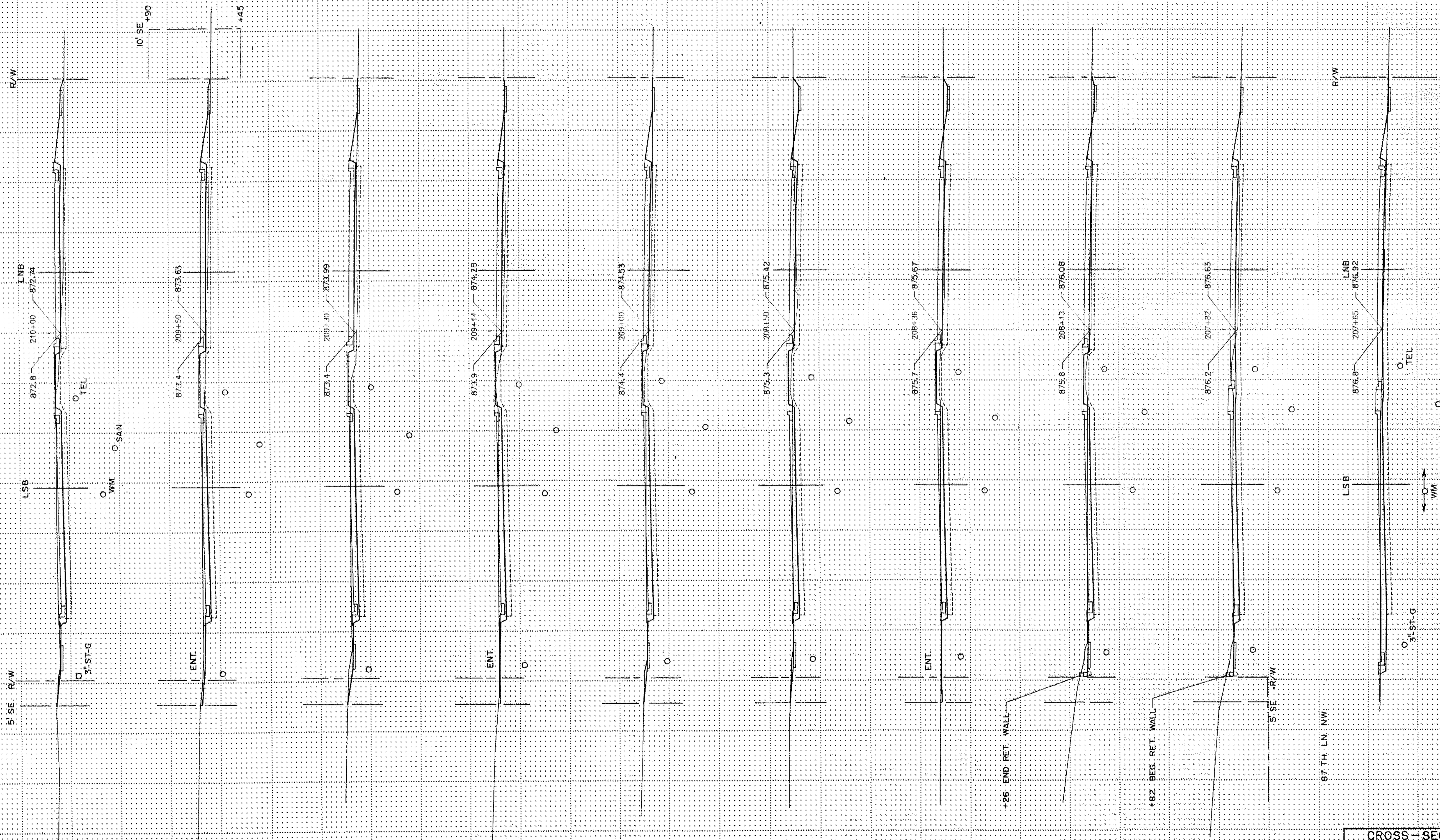
CROSS-SECTION
STA. 199+50 TO STA. 202+00

Copy Equipment Form #1 M68857

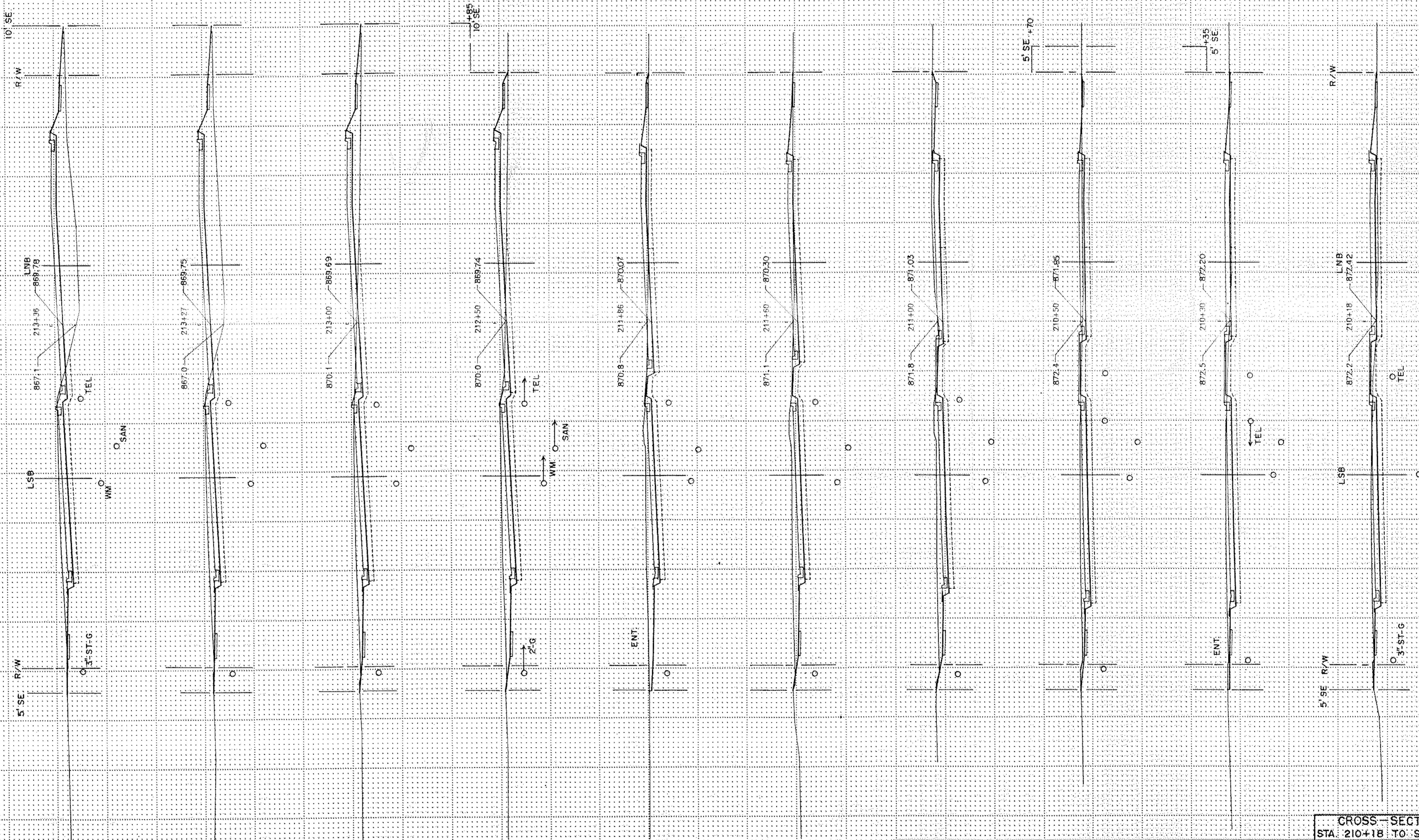
67TH LN. NW



CROSS-SECTION
STA. 203+00 TO STA. 207+37



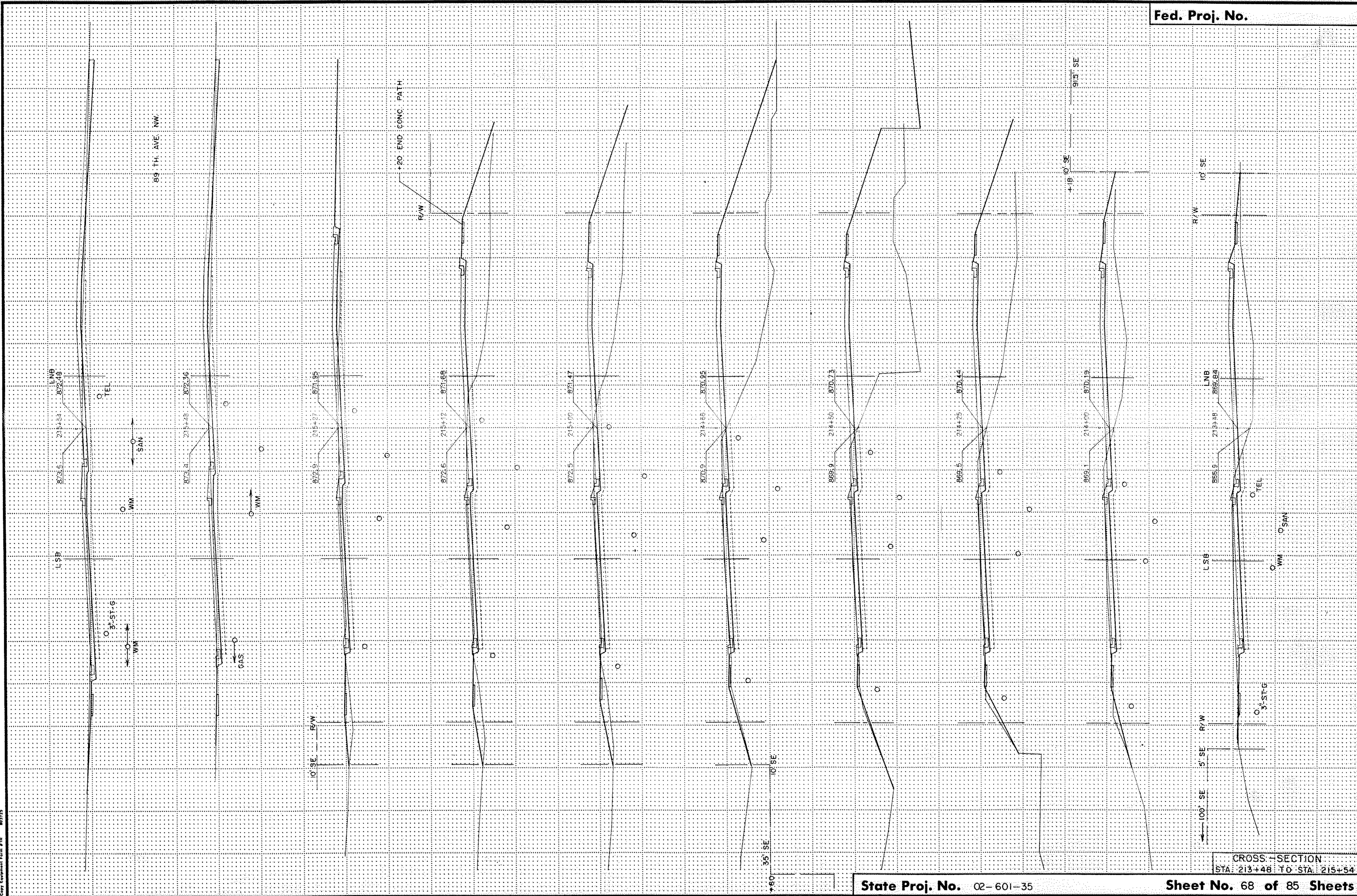
CROSS-SECTION
STA 207+65 TO STA 210+00



Copy Equipment Form #1

CROSS-SECTION
STA. 210+18 TO STA. 213+36

Copy Equipment Form #14 R03123

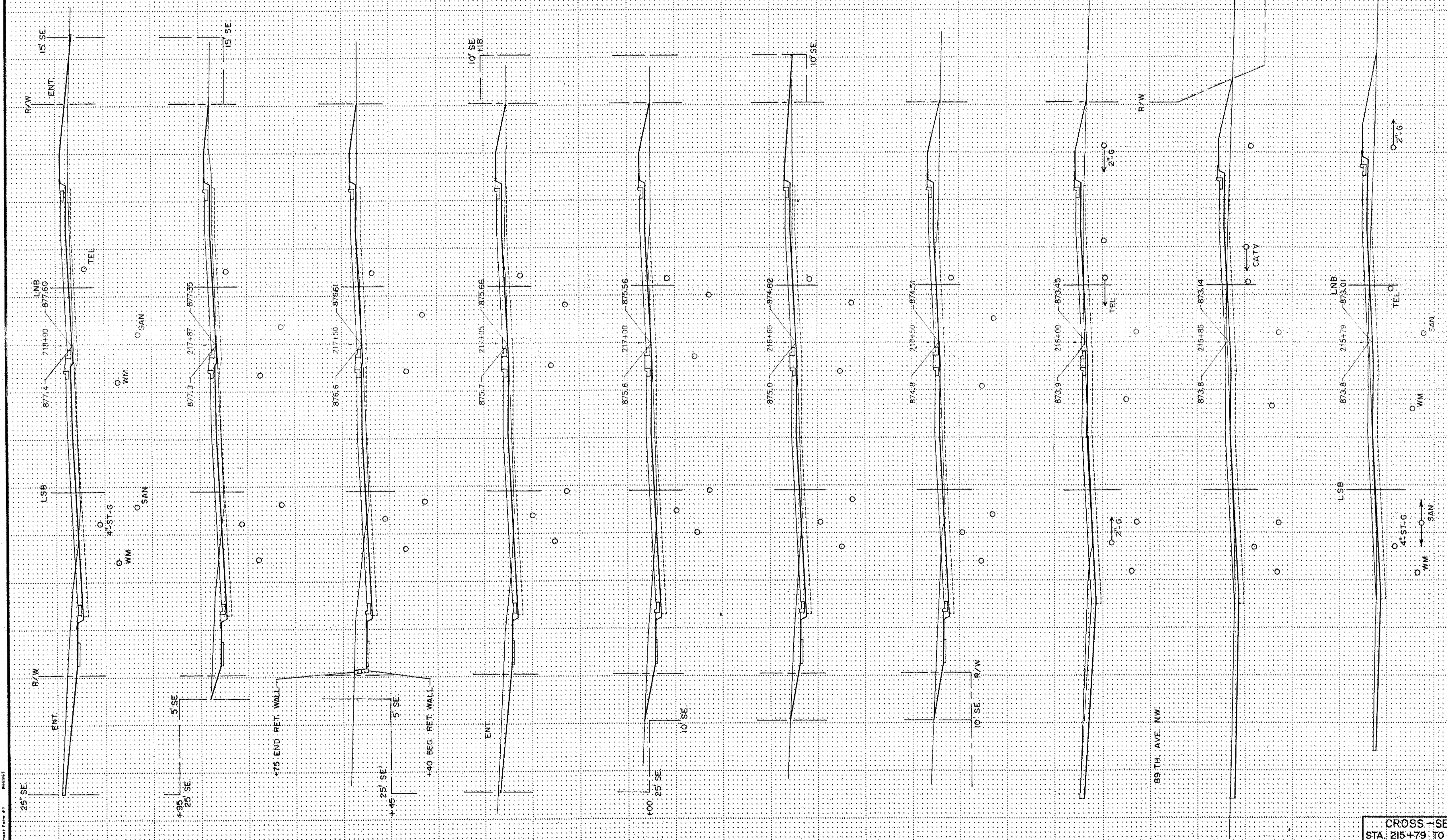


89 TH. AVE. NW

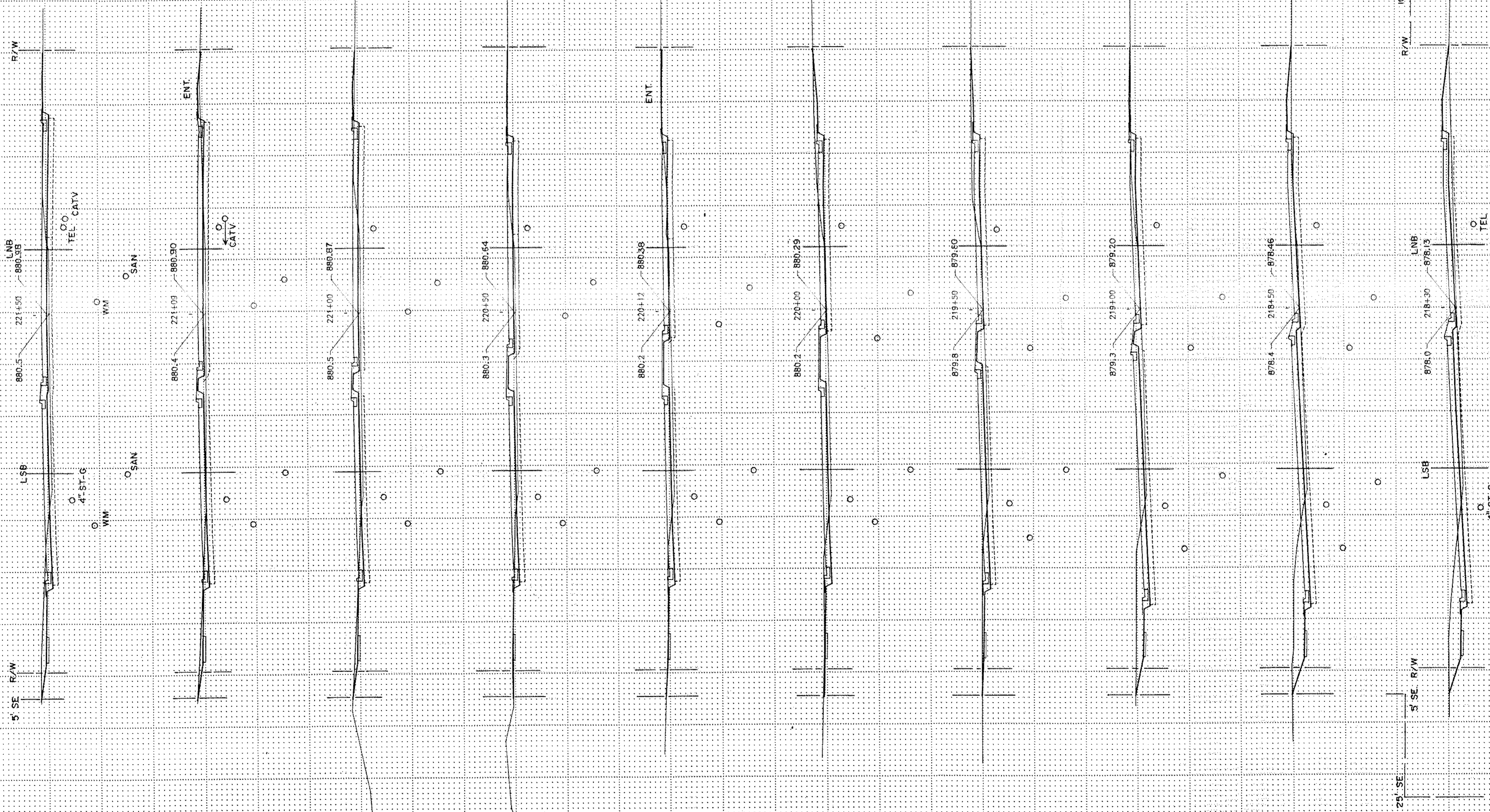
20' END CONC. PATH

CROSS-SECTION
STA. 213+48 TO STA. 215+54

Copy Equipment Form 41



CROSS-SECTION
STA. 215+79 TO STA. 218+00



R/W

LNB

LSB

5' SE R/W

TEL CATV

4" ST-G

WM

SAN

ENT.

LNB

LSB

5' SE R/W

CATV

4" ST-G

WM

SAN

ENT.

LNB

LSB

5' SE R/W

LNB

LSB

5' SE R/W

ENT.

LNB

LSB

5' SE R/W

LNB

LSB

5' SE R/W

LNB

LSB

5' SE R/W

LNB

LSB

5' SE R/W

LNB

LSB

5' SE R/W

R/W

LNB

LSB

5' SE R/W

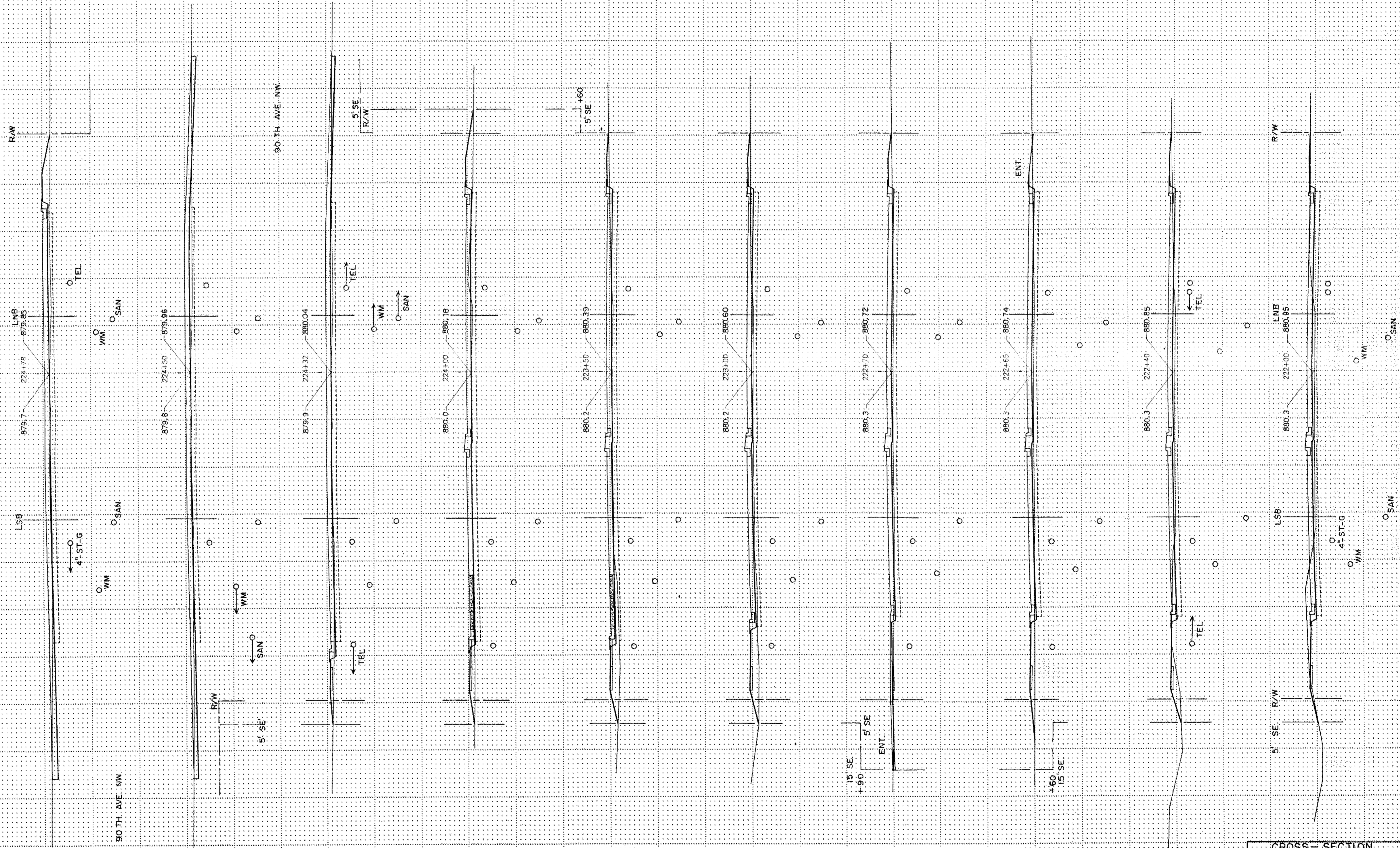
TEL

4" ST-G

WM

SAN

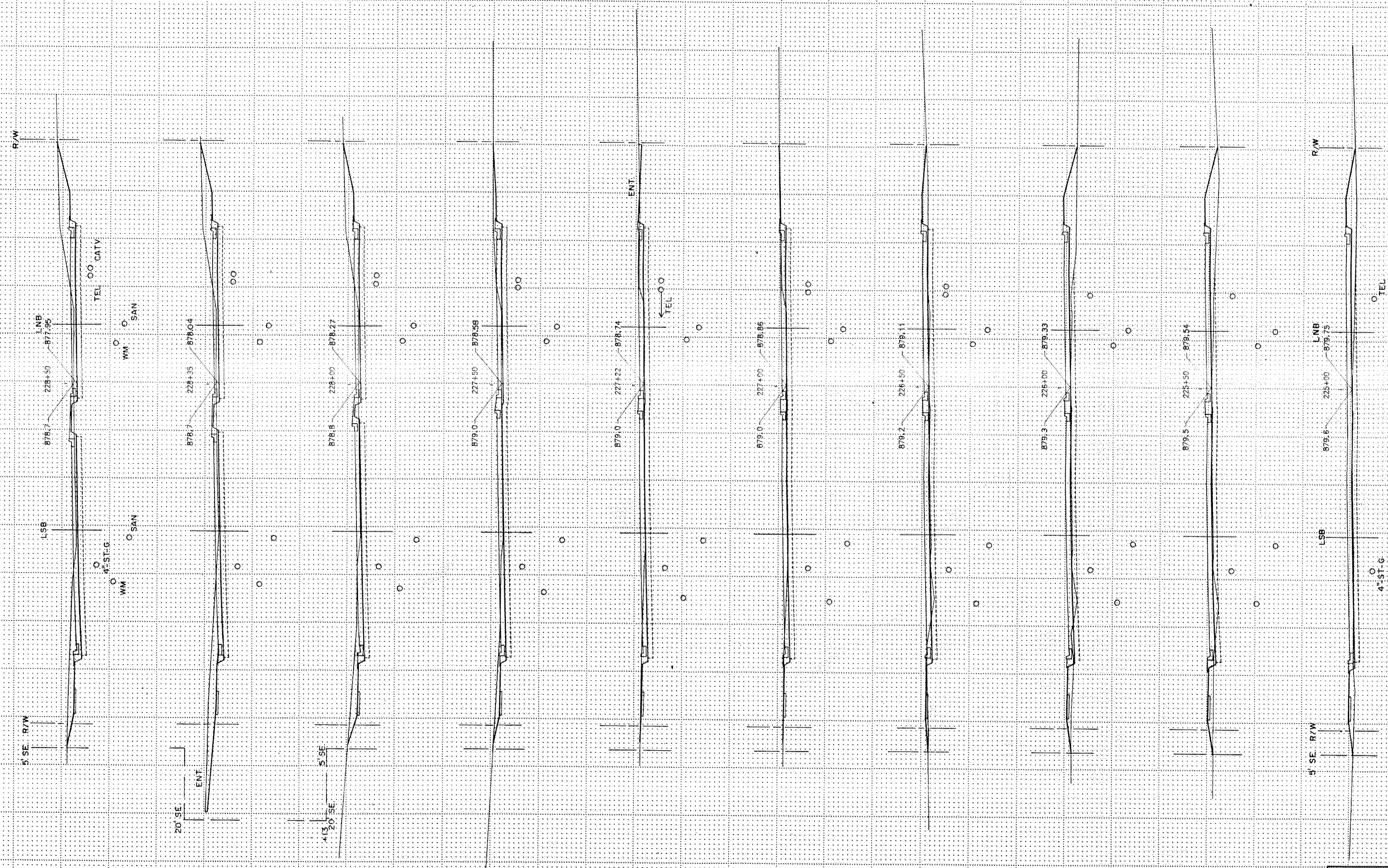
CROSS-SECTION
STA. 218+30 TO STA. 221+50



CROSS-SECTION
STA. 222+00 TO STA. 224+78

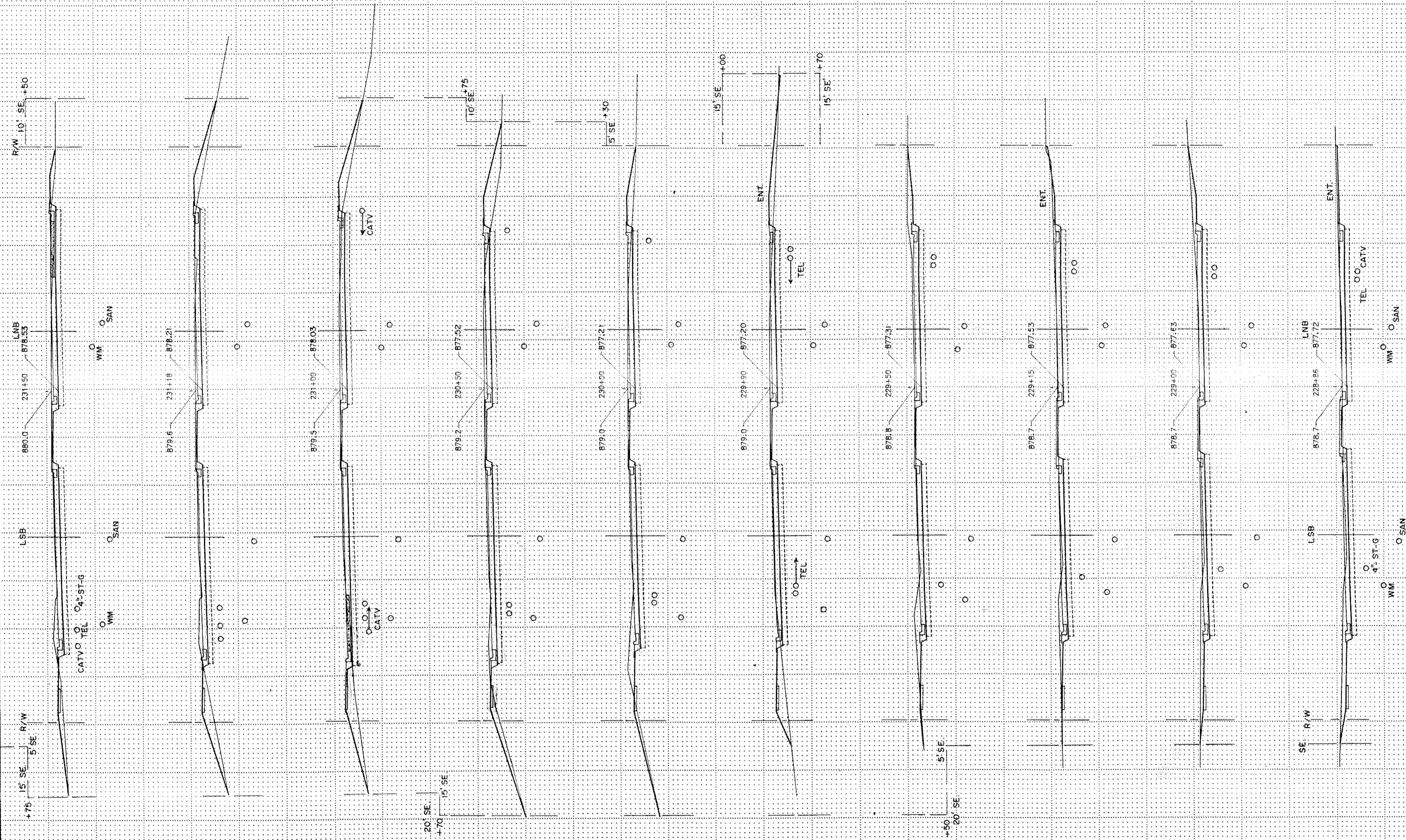
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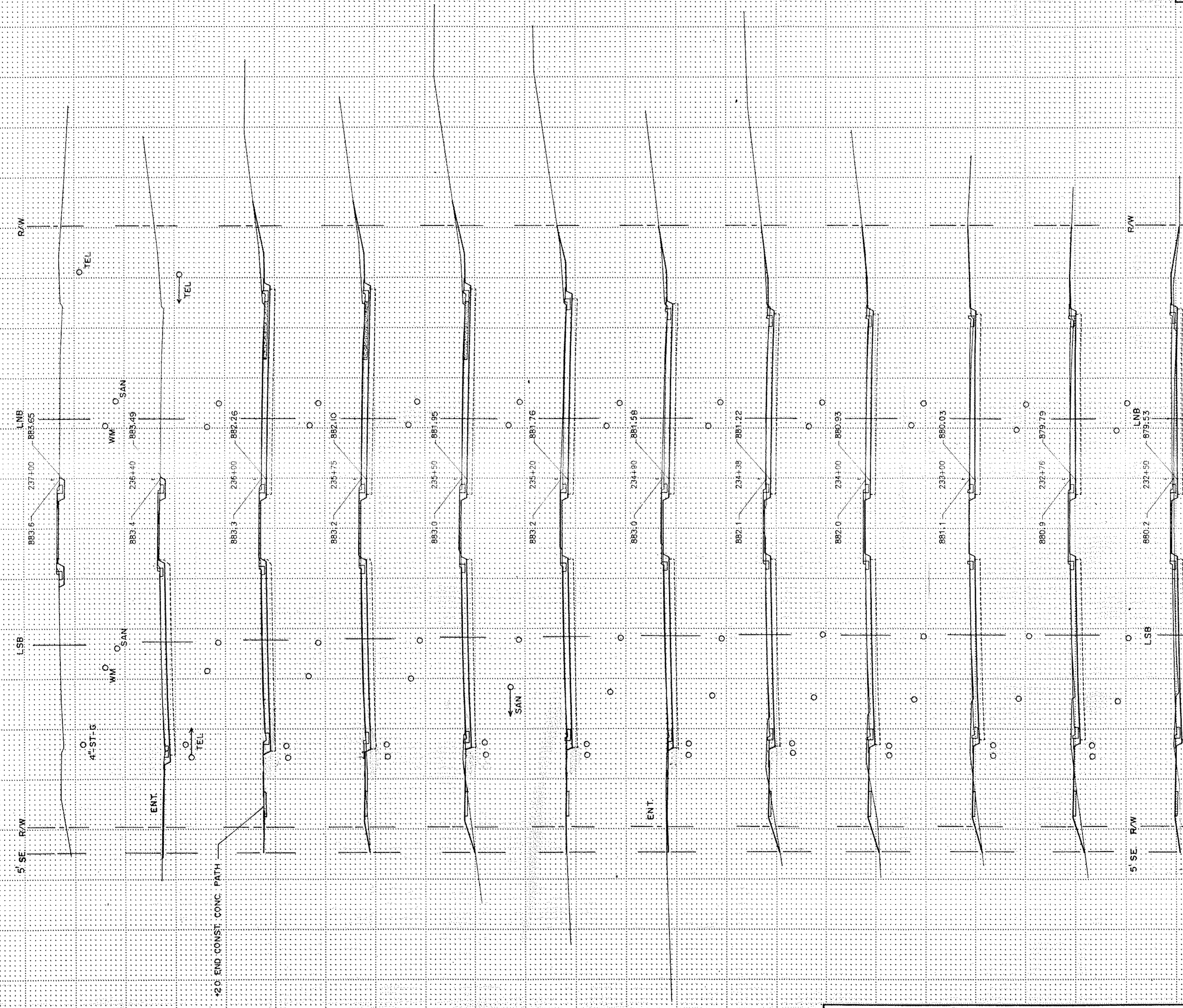


CROSS-SECTION
STA. 225+00 TO STA. 228+50.

Gray Equipment Form #1
R58567



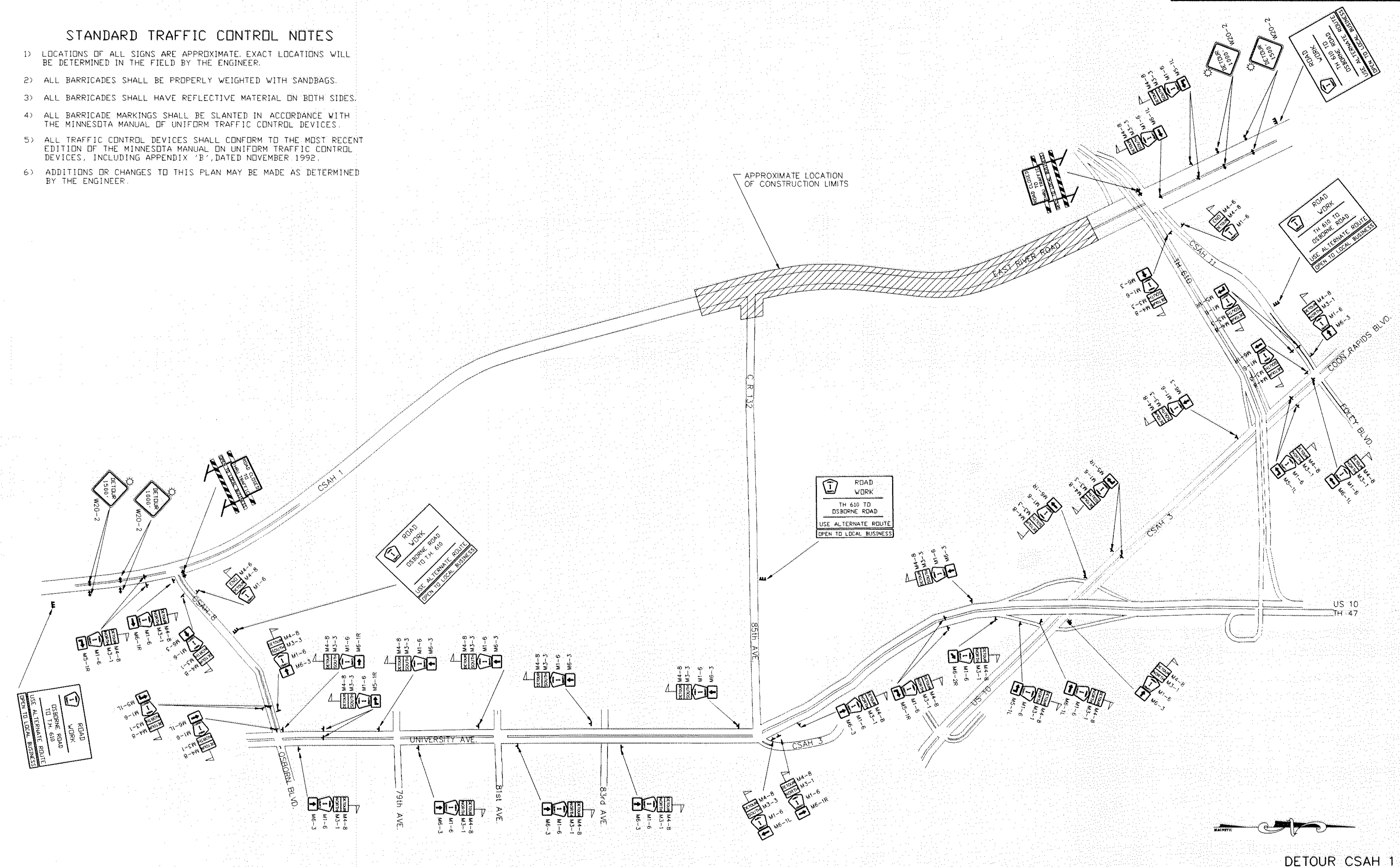
CROSS SECTION
STA 228+86 TO STA 231+50



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STANDARD TRAFFIC CONTROL NOTES

- 1) LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) ALL BARRICADES SHALL BE PROPERLY WEIGHTED WITH SANDBAGS.
- 3) ALL BARRICADES SHALL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
- 4) ALL BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 5) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED NOVEMBER 1992.
- 6) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.


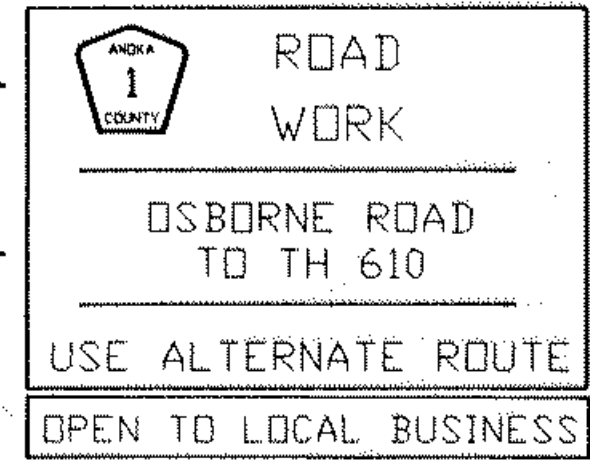
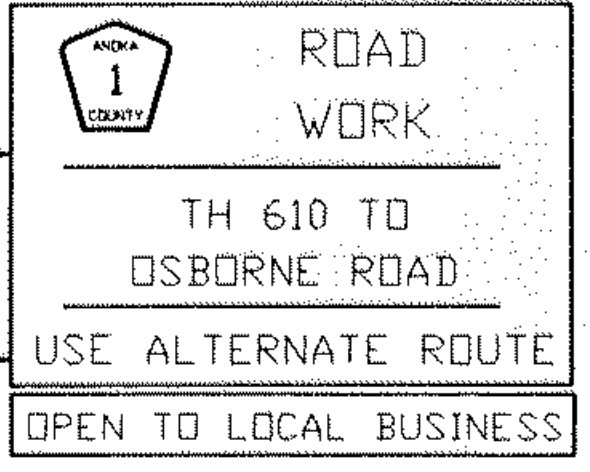
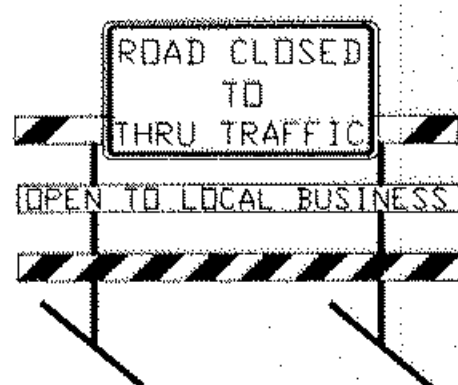


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CERTIFIED BY Douglas M. ... P.E. REG NO. 20285 3/22 19 95











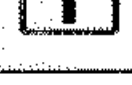



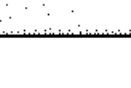
S.P. 02-601-35 S.A.P. 114-020-06 127-020-15 C.P.

DETOUR CSAH 1

| M.U.T.C.D. CODE | SIZE | INSERT | QUANTITY |
|-----------------|-------------|---|-----------|
| FLASHER | TYPE 'A' |  | 1000' • 4 |
| W20-2 | 48" x 48" | | 1500' • 4 |
| G20-X2 | 120" x 108" |  | • 2 |
| | 12" x 132" | | |
| G20-X2 | 120" x 108" |  | • 3 |
| | 12" x 132" | | |
| R11-4 | 60" x 30" |  | • 2 |
| TYPE III | 8 FOOT | | |

TO BE INSTALLED AT START OF CONSTRUCTION

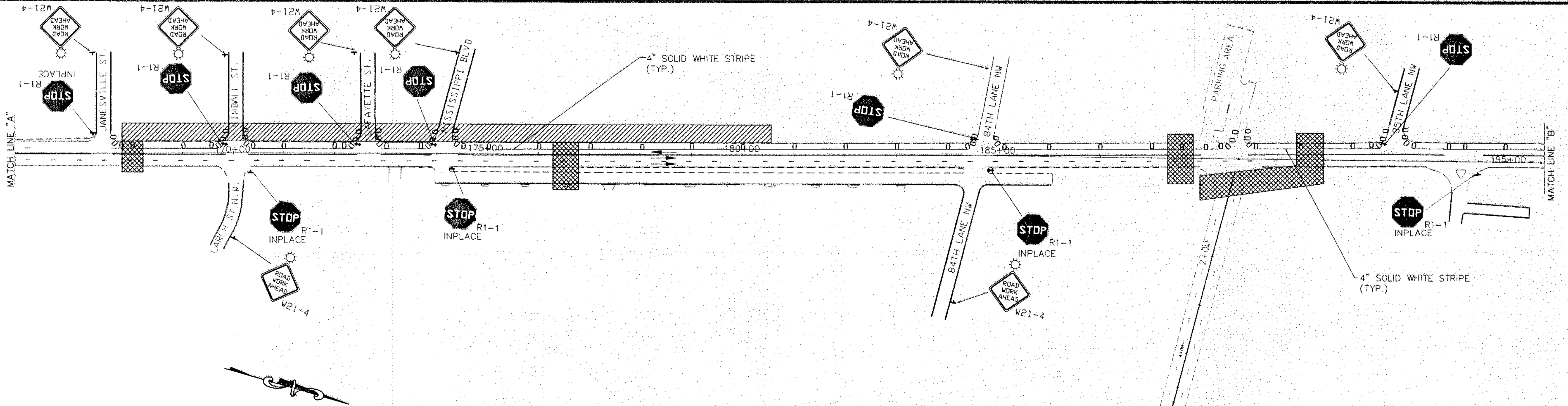
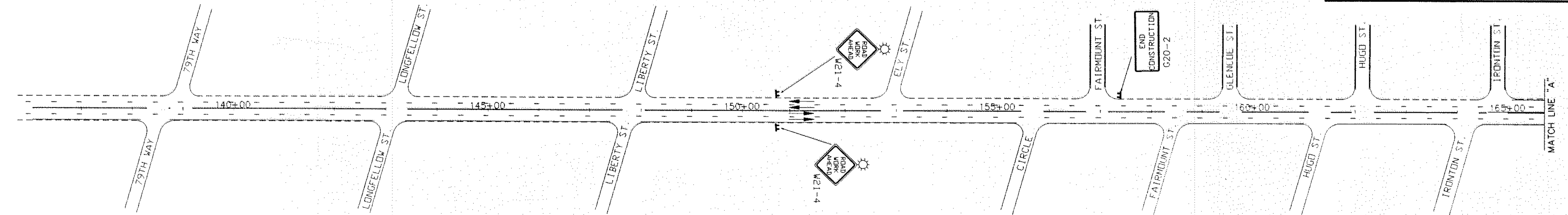
TO BE INSTALLED AT START OF CONSTRUCTION

| M.U.T.C.D. CODE | SIZE | INSERT | QUANTITY |
|-----------------|-----------|---|----------|
| FLAG | | M5-1L  | • 5 |
| M4-8 | 24" x 12" | M5-1R  | • 4 |
| M3-1 | 21" x 12" | M6-1L  | • 3 |
| M1-6 | 24" x 24" | M6-1R  | • 2 |
| | 21" x 15" | M6-3  | • 8 |
| | | M6-2  | • 1 |
| FLAG | | M5-1L  | • 2 |
| M4-8 | 24" x 12" | M5-1R  | • 6 |
| M3-3 | 21" x 12" | M6-1L  | • 2 |
| M1-6 | 24" x 24" | M6-1R  | • 3 |
| | 21" x 15" | M6-3  | • 8 |
| FLAG | | M5-1L  | • 2 |
| M4-6 | 24" x 12" | M5-1R  | • 2 |
| M4-8 | 24" x 12" | M6-1L  | • 2 |
| M1-6 | 24" x 24" | M6-1R  | • 2 |

- STANDARD TRAFFIC CONTROL NOTES**
- 1) LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) ALL BARRICADES SHALL BE PROPERLY WEIGHTED WITH SANDBAGS.
 - 3) ALL BARRICADES SHALL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
 - 4) ALL BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
 - 5) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED NOVEMBER 1992.
 - 6) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.

DETOUR QUANTITIES

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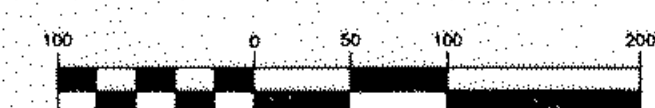
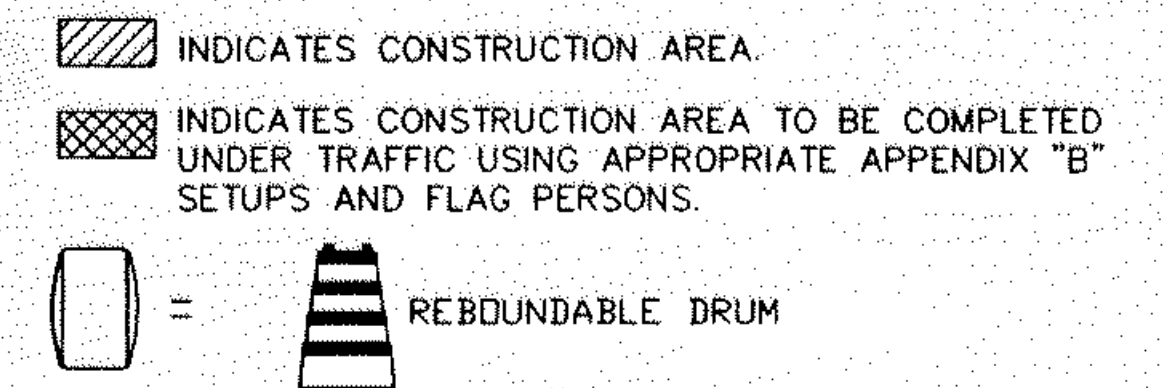
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00, AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50, NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. APPROXIMATE LIMITS OF PAVEMENT MARKING REMOVALS IN STAGE I EXTEND FROM STA 229+00 TO STA 240+00.

CONSTRUCTION:

- STORM SEWER CROSSINGS AND MAINLINE STORM SEWER AS NOTED WITH CROSS HATCHING.

TRAFFIC:

- INITIATE DETOUR FOR THRU TRAFFIC.
- ALL TRAFFIC ON EXISTING ROADWAY, WITH SB CSAH 1 RESTRICTED TO ONE LANE (INTERIOR THRU LANE).
- TRAFFIC SIGNALS AT CR 132 AND 89TH AVE ARE TO REMAIN OPERATIONAL.



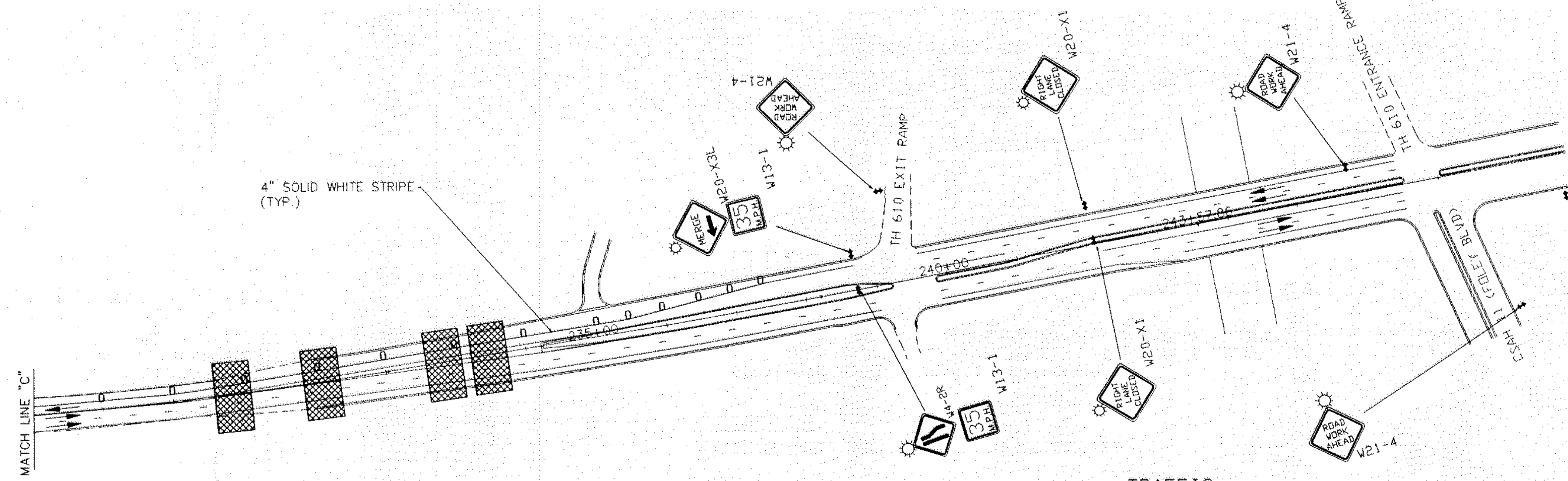
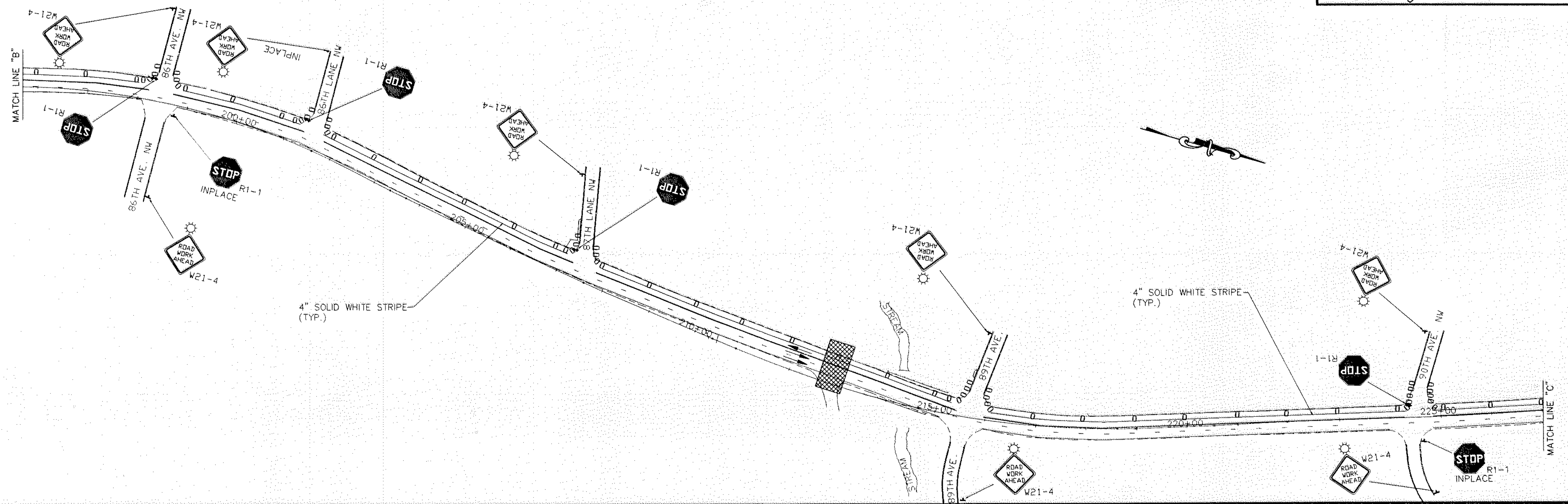
**STAGE 1
TRAFFIC CONTROL**

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CERTIFIED BY Angela M. Anichan P.E. REG NO. 20235 3/22 19 95

S.P. 02-601-35 S.A.P. 114-020-06 C.P. 127-020-15

Sheet No. 77 of 85 Sheets



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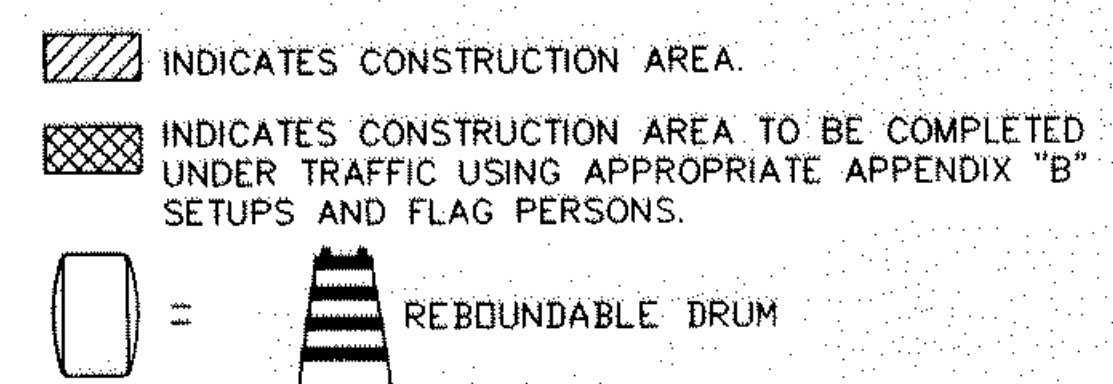
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00, AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50, NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. APPROXIMATE LIMITS OF PAVEMENT MARKING REMOVALS IN STAGE I EXTEND FROM STA 229+00 TO STA 240+00.

TRAFFIC:

- INITIATE DETOUR FOR THRU TRAFFIC.
- ALL TRAFFIC ON EXISTING ROADWAY, WITH SB CSAH 1 RESTRICTED TO ONE LANE (INTERIOR THRU LANE).
- TRAFFIC SIGNALS AT CR 132 AND 89TH AVE ARE TO REMAIN OPERATIONAL.

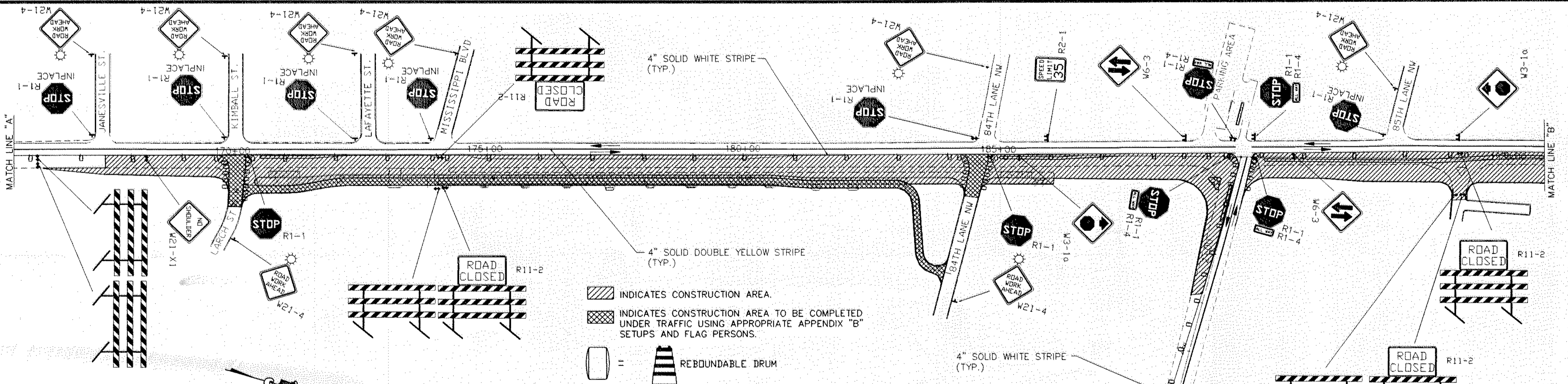
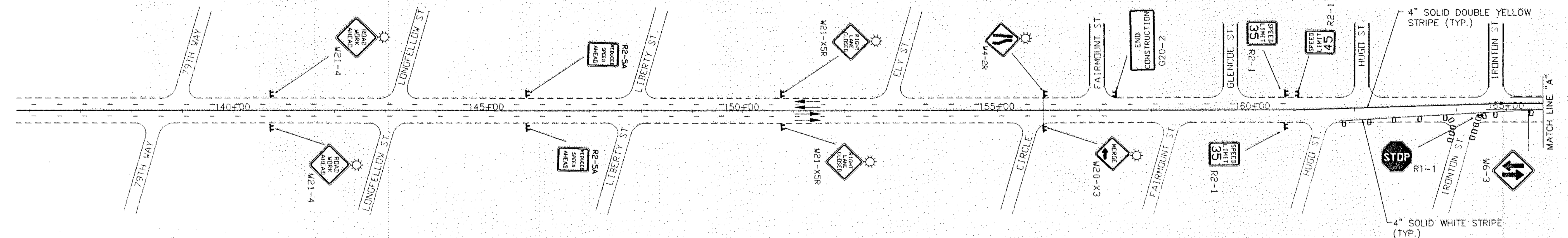
CONSTRUCTION:

- STORM SEWER CROSSINGS AND MAINLINE STORM SEWER AS NOTED WITH CROSS HATCHING.



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**STAGE 1
TRAFFIC CONTROL**



CONSTRUCTION:

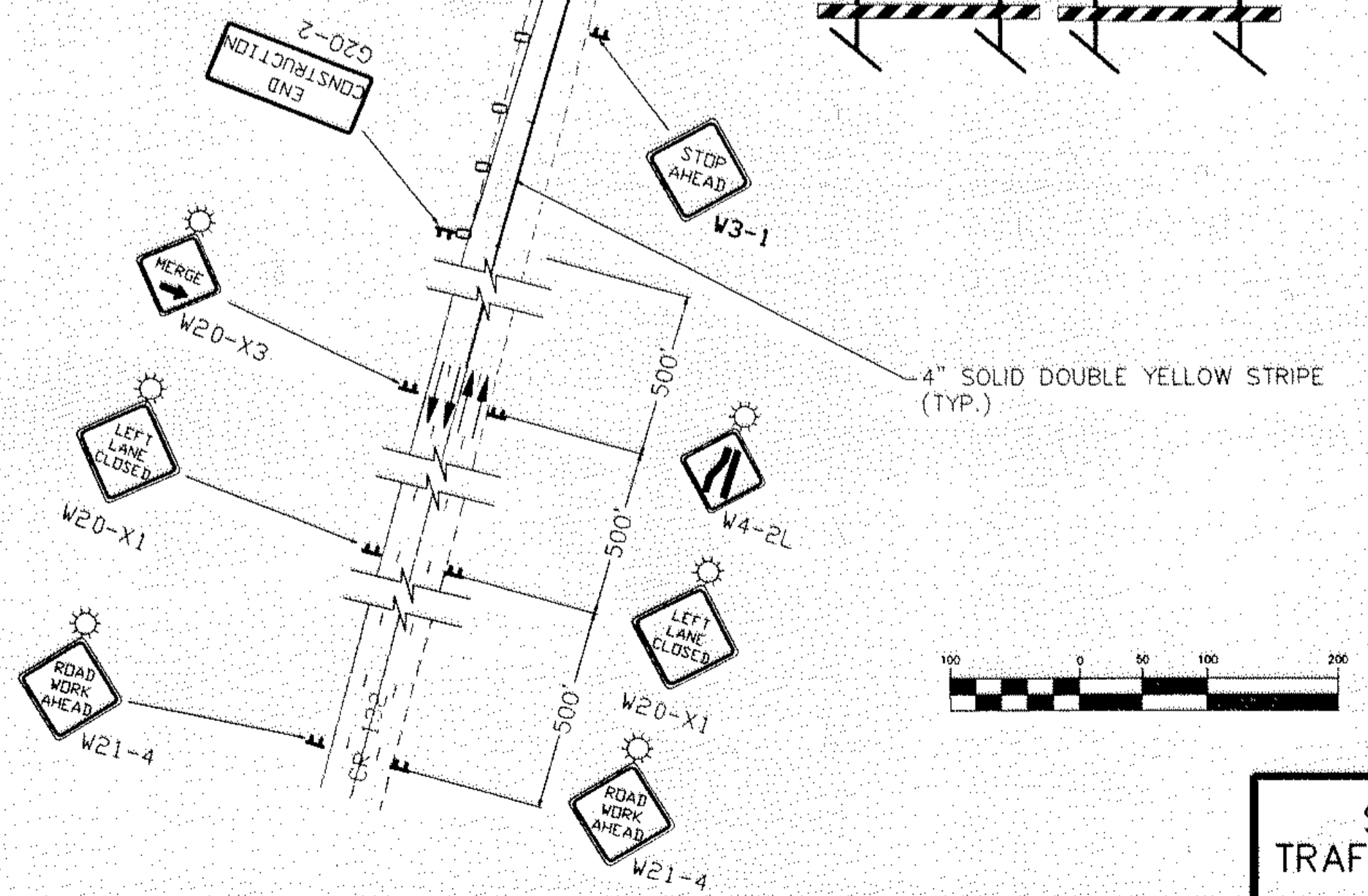
- CONSTRUCT THE EAST HALF OF CSAH 1, THE SOUTH HALF OF CR 132, AND THE ONE-WAY SERVICE DRIVE (BETWEEN LARCH ST AND 84TH LANE NW) AS NOTED WITH CROSS HATCHING, TO ADEQUATELY PROVIDE FOR 2 LANES OF 2-WAY TRAFFIC IN STAGE 3.
- PAVE TO BASE COURSE. PLACE BINDER TO COVER CONFLICTING PAVEMENT MARKINGS PRIOR TO STAGE 4. WEAR COURSE TO BE CONSTRUCTED AFTER COMPLETION OF STAGE 4.

TRAFFIC:

- DETOUR FOR THRU TRAFFIC REMAINS INPLACE.
- TRAFFIC SIGNALS AT CR 132 AND 89TH AVE ARE TO BE DARKENED UPON INSTALLATION OF ALL-WAY STOPS AT BOTH INTERSECTIONS.
- INITIATE STAGE 2 TRAFFIC CONTROL-ALL CSAH 1 TRAFFIC ON WESTERLY 22' OF EXISTING ROADWAY, WITH BOTH NB AND SB RESTRICTED TO ONE LANE (SINGLE LANE NB ON FORMER INTERIOR SB LANE, SINGLE LANE SB ON WESTERLY 11' OF EXISTING MAT). ALL CR 132 TRAFFIC ON NORTH HALF OF EXISTING ROADWAY, WITH BOTH DIRECTIONS RESTRICTED TO ONE LANE.
- LANE SHIFTS AT PROJECT TERMINI ON EXISTING MAT.

NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00, AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50, NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. APPROXIMATE LIMITS OF PAVEMENT MARKING REMOVALS IN STAGE 2 EXTEND FROM STA 157+00 TO STA 166+00 AND FROM STA 229+00 TO STA 240+00 ON CSAH 1. PAVEMENT MARKING REMOVALS ON CR 132 IN STAGE 2 EXTEND FROM STA 2+00 TO STA 7+00.

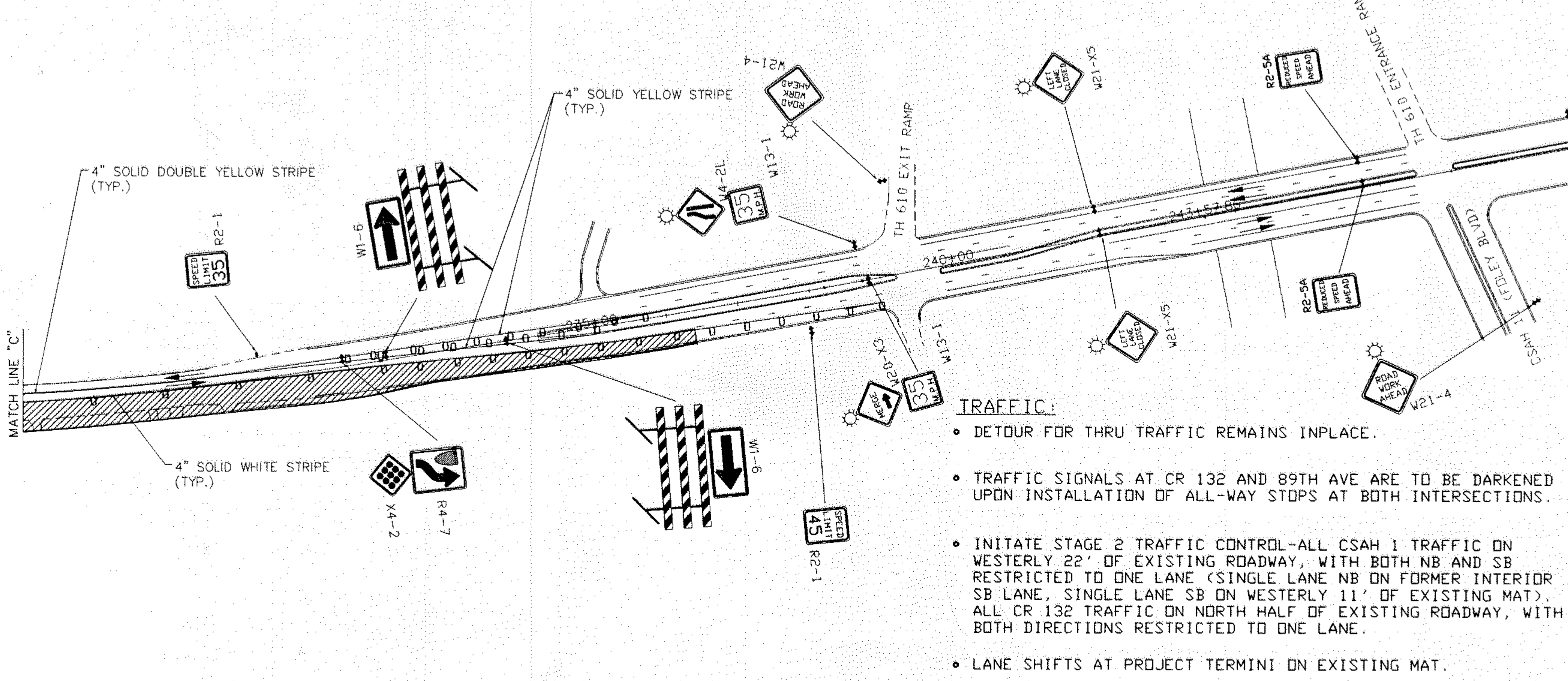
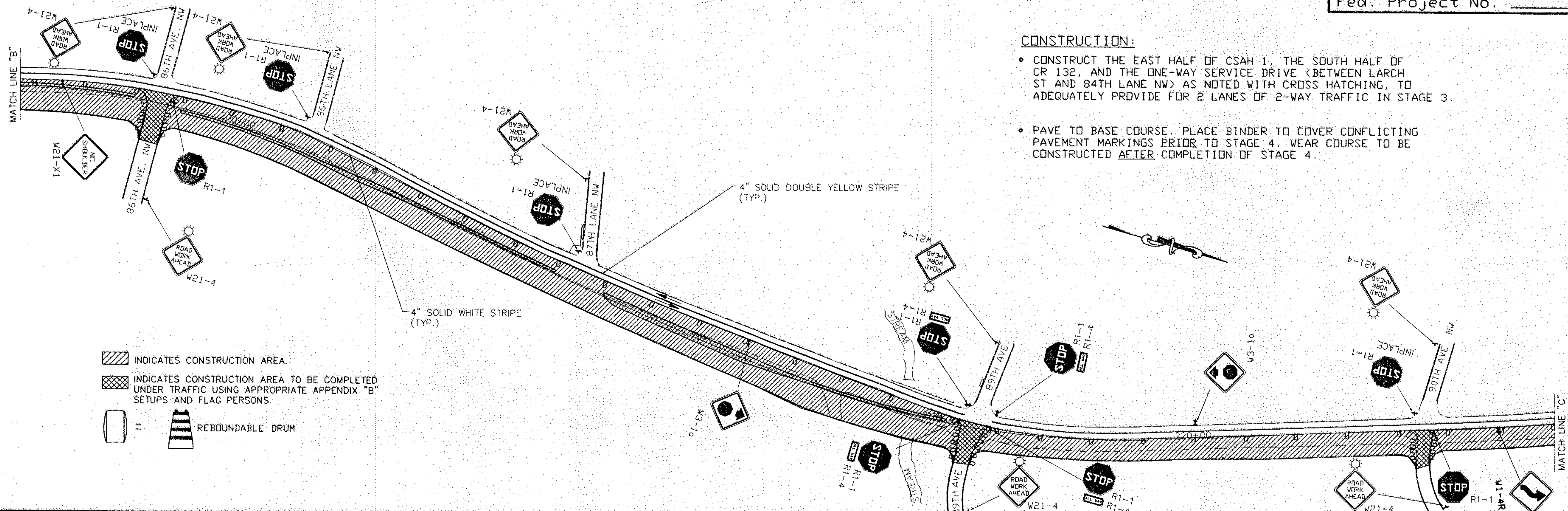


STAGE 2 TRAFFIC CONTROL

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CONSTRUCTION:

- CONSTRUCT THE EAST HALF OF CSAH 1, THE SOUTH HALF OF CR 132, AND THE ONE-WAY SERVICE DRIVE (BETWEEN LARCH ST AND 84TH LANE NW) AS NOTED WITH CROSS HATCHING, TO ADEQUATELY PROVIDE FOR 2 LANES OF 2-WAY TRAFFIC IN STAGE 3.
- PAVE TO BASE COURSE. PLACE BINDER TO COVER CONFLICTING PAVEMENT MARKINGS PRIOR TO STAGE 4. WEAR COURSE TO BE CONSTRUCTED AFTER COMPLETION OF STAGE 4.



TRAFFIC:

- DETOUR FOR THRU TRAFFIC REMAINS INPLACE.
- TRAFFIC SIGNALS AT CR 132 AND 89TH AVE ARE TO BE DARKENED UPON INSTALLATION OF ALL-WAY STOPS AT BOTH INTERSECTIONS.
- INITIATE STAGE 2 TRAFFIC CONTROL-ALL CSAH 1 TRAFFIC ON WESTERLY 22' OF EXISTING ROADWAY, WITH BOTH NB AND SB RESTRICTED TO ONE LANE (SINGLE LANE NB ON FORMER INTERIOR SB LANE, SINGLE LANE SB ON WESTERLY 11' OF EXISTING MAT). ALL CR 132 TRAFFIC ON NORTH HALF OF EXISTING ROADWAY, WITH BOTH DIRECTIONS RESTRICTED TO ONE LANE.
- LANE SHIFTS AT PROJECT TERMINI ON EXISTING MAT.

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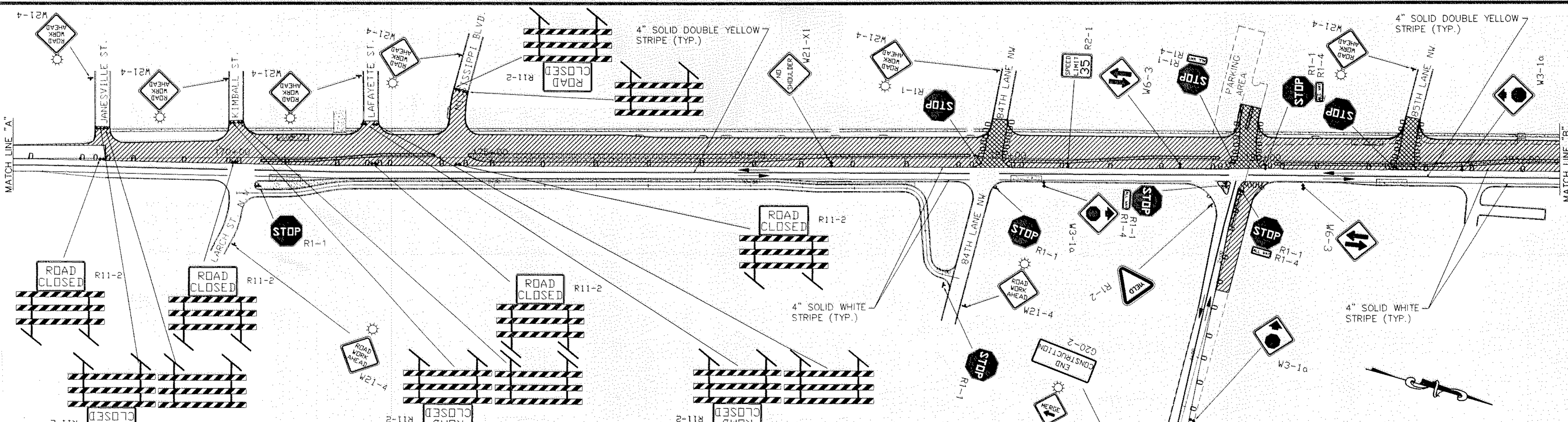
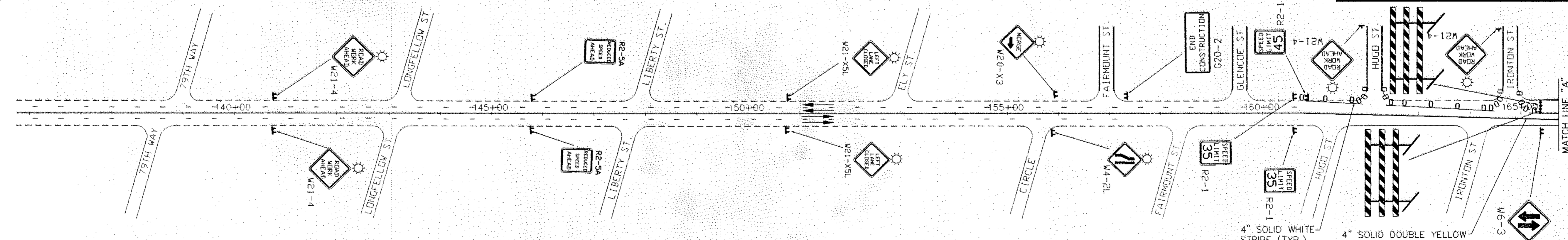
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00, AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50, NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. APPROXIMATE LIMITS OF PAVEMENT MARKING REMOVALS IN STAGE 2 EXTEND FROM STA 157+00 TO STA 166+00 AND FROM STA 229+00 TO STA 240+00 ON CSAH 1. PAVEMENT MARKING REMOVALS ON CR 132 IN STAGE 2 EXTEND FROM STA 2+00 TO STA 7+00.

STAGE 2 TRAFFIC CONTROL

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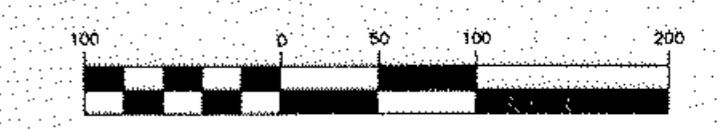
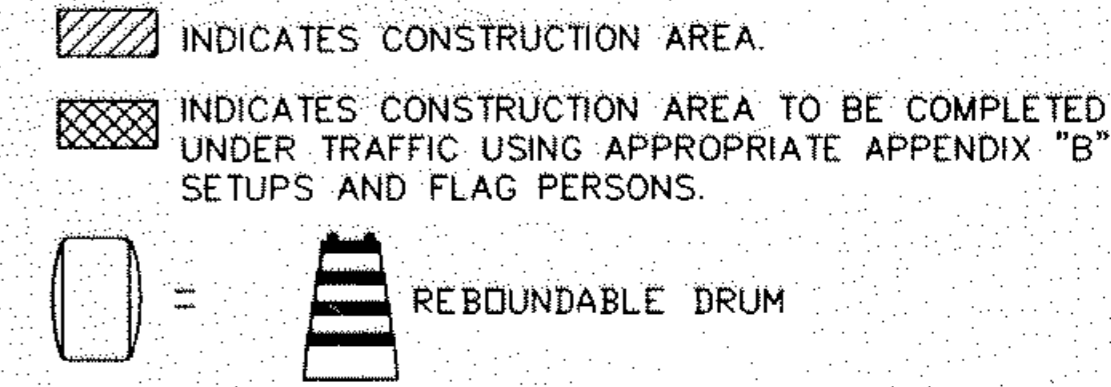
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00, AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50, NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. APPROXIMATE LIMITS OF PAVEMENT MARKING REMOVALS IN STAGE 3 EXTEND FROM STA 157+00 TO STA 166+00 AND FROM STA 229+00 TO STA 240+00 ON CSAH 1. PAVEMENT MARKING REMOVALS ON CR 132 IN STAGE 3 EXTEND FROM STA 2+00 TO STA 7+00.

CONSTRUCTION:

- CONSTRUCT THE REMAINING WEST HALF OF CSAH 1 AND NORTH HALF OF CR 132 WITH THE EXCEPTION OF THE CENTER ISLAND MEDIAN AND INTERIOR LANES AT THE NORTH PROJECT TERMINI, AS NOTED WITH CROSS HATCHING.
- COMPLETE TRAFFIC SIGNAL CONSTRUCTION AT CR 132 AND 89TH AVE DURING THIS STAGE.
- PAVE TO BINDER COURSE THIS STAGE. WEAR COURSE TO BE CONSTRUCTED AFTER COMPLETION OF STAGE 4.

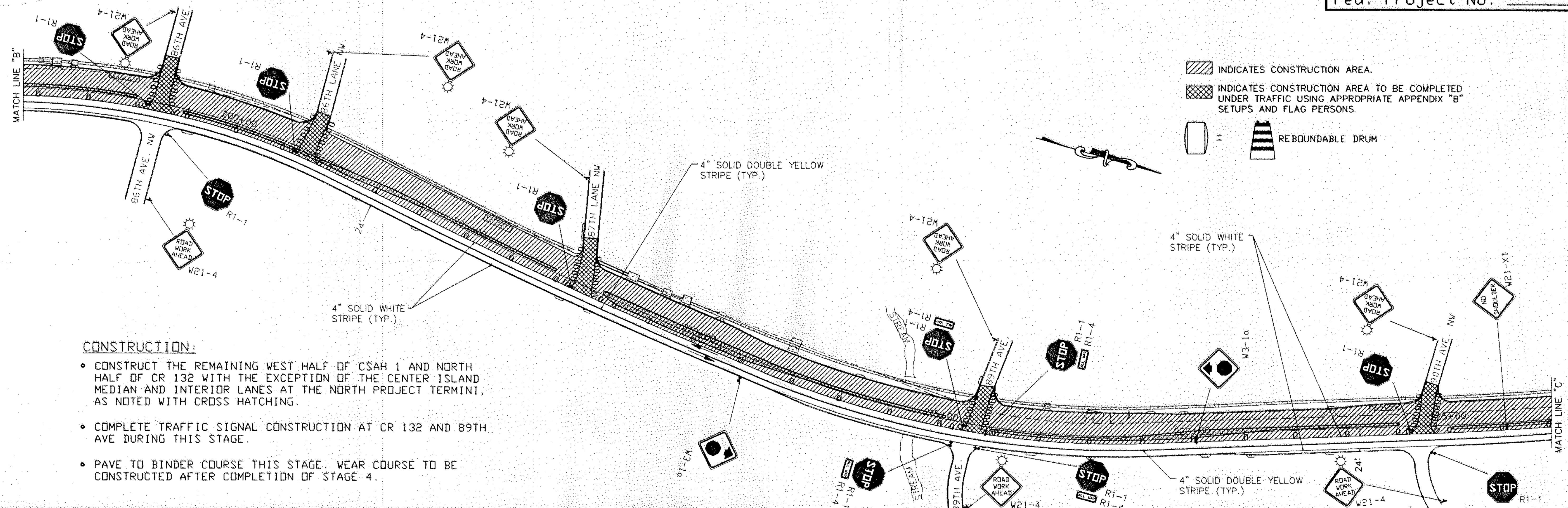
TRAFFIC:

- DETOUR FOR THRU TRAFFIC REMAINS INPLACE. ALL-WAY STOPS REMAIN INPLACE AT CR 132 AND 89TH AVE.
- INITIATE STAGE 3 TRAFFIC CONTROL-ALL CSAH 1 TRAFFIC ON EASTERLY 24' OF NEWLY CONSTRUCTED ROADWAY, WITH BOTH DIRECTIONS RESTRICTED TO ONE LANE. ALL CR 132 TRAFFIC ON SOUTH HALF OF NEWLY CONSTRUCTED ROADWAY, WITH BOTH DIRECTIONS RESTRICTED TO ONE LANE.
- LANE SHIFTS AT PROJECT TERMINI ON EXISTING MAT.



STAGE 3 TRAFFIC CONTROL

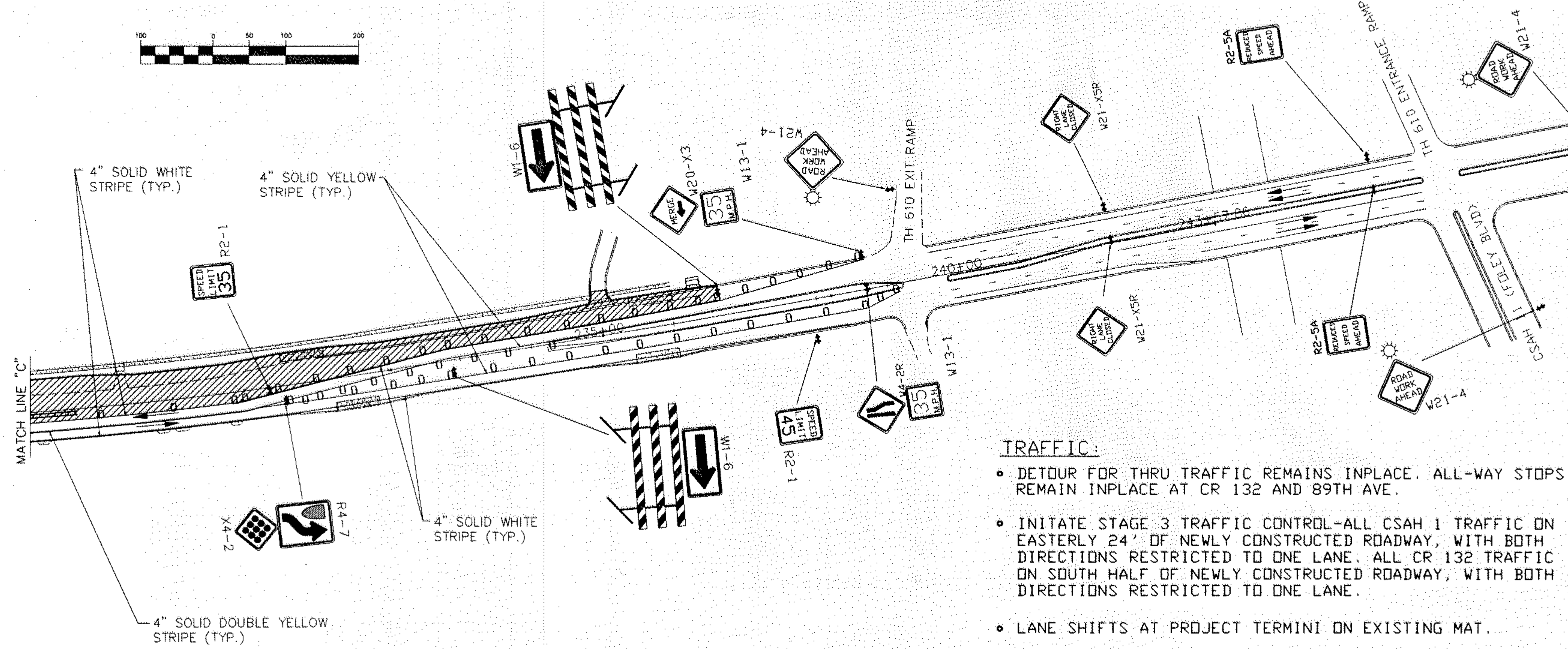
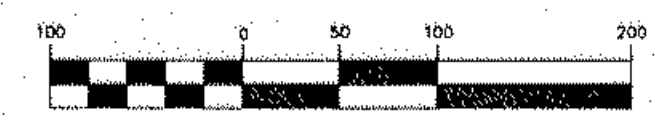
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- INDICATES CONSTRUCTION AREA.
- INDICATES CONSTRUCTION AREA TO BE COMPLETED UNDER TRAFFIC USING APPROPRIATE APPENDIX "B" SETUPS AND FLAG PERSONS.
- = REBOUNDABLE DRUM

CONSTRUCTION:

- CONSTRUCT THE REMAINING WEST HALF OF CSAH 1 AND NORTH HALF OF CR 132 WITH THE EXCEPTION OF THE CENTER ISLAND MEDIAN AND INTERIOR LANES AT THE NORTH PROJECT TERMINI, AS NOTED WITH CROSS HATCHING.
- COMPLETE TRAFFIC SIGNAL CONSTRUCTION AT CR 132 AND 89TH AVE DURING THIS STAGE.
- PAVE TO BINDER COURSE THIS STAGE. WEAR COURSE TO BE CONSTRUCTED AFTER COMPLETION OF STAGE 4.



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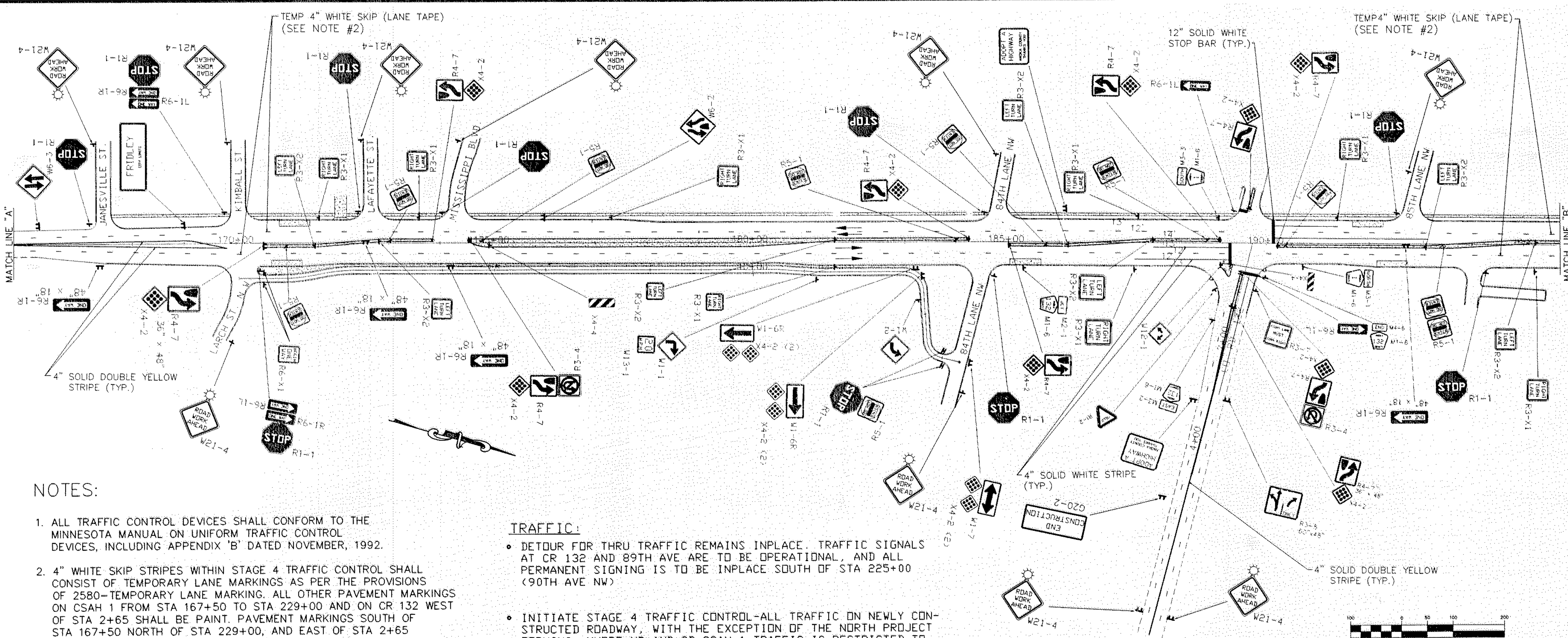
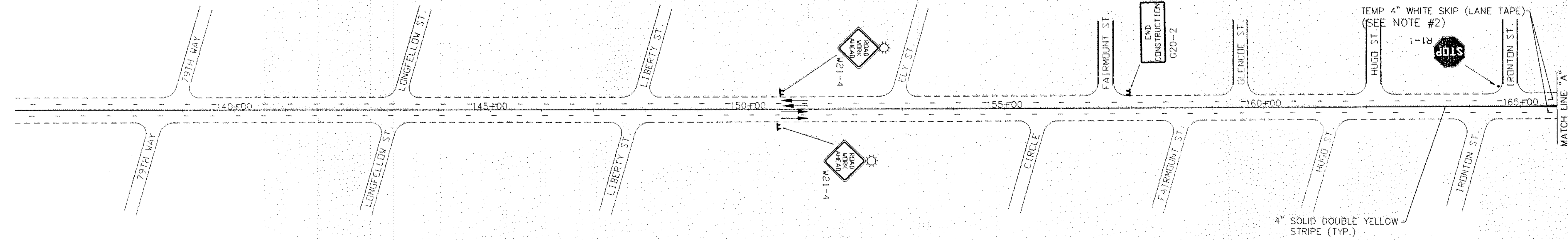
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00, AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50, NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. APPROXIMATE LIMITS OF PAVEMENT MARKING REMOVALS IN STAGE 3 EXTEND FROM STA 157+00 TO STA 166+00 AND FROM STA 229+00 TO STA 240+00 ON CSAH 1. PAVEMENT MARKING REMOVALS ON CR 132 IN STAGE 3 EXTEND FROM STA 2+00 TO STA 7+00.

TRAFFIC:

- DETOUR FOR THRU TRAFFIC REMAINS INPLACE. ALL-WAY STOPS REMAIN INPLACE AT CR 132 AND 89TH AVE.
- INITIATE STAGE 3 TRAFFIC CONTROL-ALL CSAH 1 TRAFFIC ON EASTERLY 24' OF NEWLY CONSTRUCTED ROADWAY, WITH BOTH DIRECTIONS RESTRICTED TO ONE LANE. ALL CR 132 TRAFFIC ON SOUTH HALF OF NEWLY CONSTRUCTED ROADWAY, WITH BOTH DIRECTIONS RESTRICTED TO ONE LANE.
- LANE SHIFTS AT PROJECT TERMINI ON EXISTING MAT.

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STAGE 3 TRAFFIC CONTROL



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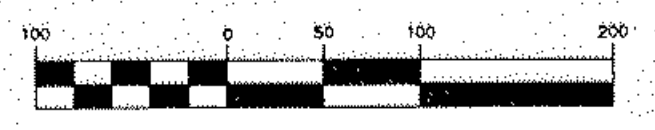
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. 4" WHITE SKIP STRIPES WITHIN STAGE 4 TRAFFIC CONTROL SHALL CONSIST OF TEMPORARY LANE MARKINGS AS PER THE PROVISIONS OF 2580-TEMPORARY LANE MARKING. ALL OTHER PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00 AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50 NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

TRAFFIC:

- DETOUR FOR THRU TRAFFIC REMAINS INPLACE. TRAFFIC SIGNALS AT CR 132 AND 89TH AVE ARE TO BE OPERATIONAL, AND ALL PERMANENT SIGNING IS TO BE INPLACE SOUTH OF STA 225+00 (90TH AVE NW)
- INITIATE STAGE 4 TRAFFIC CONTROL-ALL TRAFFIC ON NEWLY CONSTRUCTED ROADWAY, WITH THE EXCEPTION OF THE NORTH PROJECT TERMINI, WHERE NB AND SB CSAH 1 TRAFFIC IS RESTRICTED TO ONE LANE.
- LANE SHIFTS AT NORTH PROJECT TERMINI ON EXISTING MAT.
- PERMANENT STRIPING IS TO BE INSTALLED FOLLOWING COMPLETION OF PAVING (FINAL WEAR COURSE).

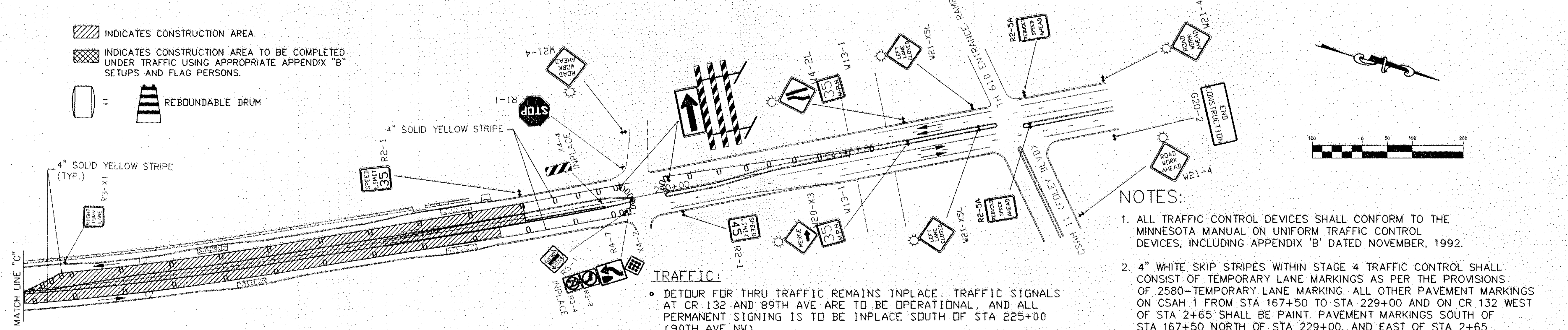
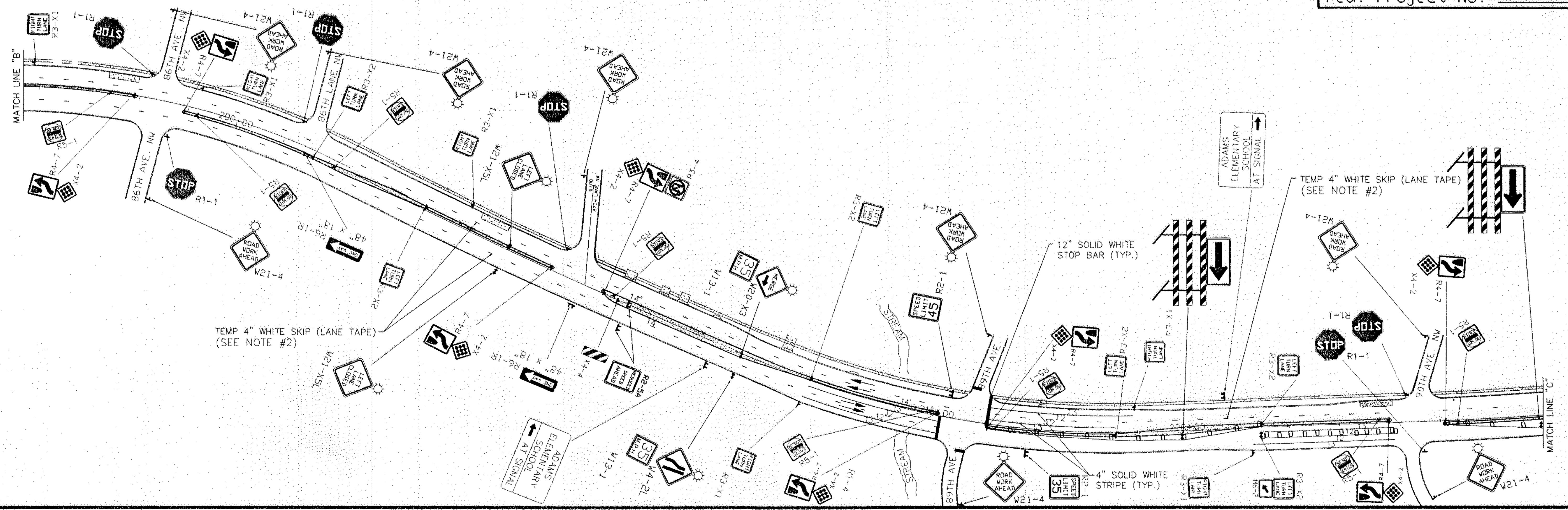
CONSTRUCTION:

- CONSTRUCT CENTER ISLAND MEDIAN AND INTERIOR LANES ON CSAH 1 AT NORTH PROJECT TERMINI, AS NOTED WITH CROSS HATCHING.
- WEAR COURSE CONSTRUCTED UTILIZING SHORT TERM LANE CLOSURES FROM APPENDIX 'B', FOLLOWING CENTER ISLAND MEDIAN CONSTRUCTION.



STAGE 4 TRAFFIC CONTROL

| | | |
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| REVISIONS | DATE | BY |
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- INDICATES CONSTRUCTION AREA.
- INDICATES CONSTRUCTION AREA TO BE COMPLETED UNDER TRAFFIC USING APPROPRIATE APPENDIX "B" SETUPS AND FLAG PERSONS.
- = REBOUNDABLE DRUM



NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. 4" WHITE SKIP STRIPES WITHIN STAGE 4 TRAFFIC CONTROL SHALL CONSIST OF TEMPORARY LANE MARKINGS AS PER THE PROVISIONS OF 2580-TEMPORARY LANE MARKING. ALL OTHER PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00 AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50 NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

TRAFFIC:

- DETOUR FOR THRU TRAFFIC REMAINS INPLACE. TRAFFIC SIGNALS AT CR 132 AND 89TH AVE ARE TO BE OPERATIONAL, AND ALL PERMANENT SIGNING IS TO BE INPLACE SOUTH OF STA 225+00 (90TH AVE NW)
- INITIATE STAGE 4 TRAFFIC CONTROL-ALL TRAFFIC ON NEWLY CONSTRUCTED ROADWAY, WITH THE EXCEPTION OF THE NORTH PROJECT TERMINI, WHERE NB AND SB CSAH 1 TRAFFIC IS RESTRICTED TO ONE LANE.
- LANE SHIFTS AT NORTH PROJECT TERMINI ON EXISTING MAT.
- PERMANENT STRIPING IS TO BE INSTALLED FOLLOWING COMPLETION OF PAVING (FINAL WEAR COURSE).

CONSTRUCTION:

- CONSTRUCT CENTER ISLAND MEDIAN AND INTERIOR LANES ON CSAH 1 AT NORTH PROJECT TERMINI, AS NOTED WITH CROSS HATCHING.
- WEAR COURSE CONSTRUCTED UTILIZING SHORT TERM LANE CLOSURES FROM APPENDIX 'B', FOLLOWING CENTER ISLAND MEDIAN CONSTRUCTION.

STAGE 4 TRAFFIC CONTROL

| REVISIONS | DATE | BY |
|-----------|------|----|
| | | |
| | | |

| M.U.T.C.D. CODE | SIZE | INSERT | STAGE I | STAGE II | STAGE III | STAGE IV |
|-----------------|-------------|--------|---------|----------|-----------|----------|
| | | | QTY | QTY | QTY | QTY |
| R1-1 | 48"x48" | | 9 | 13 | 19 | 0 |
| R1-4 | 18"x16" | | 0 | 8 | 8 | 0 |
| R2-1 | 24"x30" | | 0 | 4 | 4 | 2 |
| R2-5a | 24"x30" | | 0 | 4 | 4 | 4 |
| R4-7 | 30"x36" | | 0 | 1 | 1 | 0 |
| X4-2 | 18"x18" | | 0 | 1 | 1 | 0 |
| R1-2 | 36"x36"x36" | | 0 | 0 | 1 | 0 |
| R11-2 | 48"x30" | | 0 | 4 | 8 | 0 |
| TYPE III | 8 FT. | | 0 | 8 | 14 | 0 |
| W1-6L | 48"x24" | | 0 | 0 | 1 | 0 |
| TYPE III | 8 FT. | | 0 | 0 | 1 | 0 |
| W1-6R | 48"x24" | | 0 | 2 | 1 | 3 |
| TYPE III | 8 FT. | | 0 | 2 | 1 | 3 |
| W1-4R | 48"x48" | | 0 | 1 | 0 | 0 |
| R2-1 | 24"x30" | | 0 | 2 | 2 | 2 |
| W3-1a | 48"x48" | | 0 | 5 | 5 | 0 |
| FLASHER | | | 1 | 1 | 2 | 0 |
| W4-2R | 48"x48" | | 1 | 1 | 2 | 0 |
| W13-1 | 24"x24" | | 1 | 0 | 1 | 0 |
| FLASHER | | | 0 | 2 | 1 | 2 |
| W4-2L | 48"x48" | | 0 | 2 | 1 | 2 |
| W13-1 | 24"x24" | | 0 | 1 | 0 | 2 |

| M.U.T.C.D. CODE | SIZE | INSERT | STAGE I | STAGE II | STAGE III | STAGE IV |
|--------------------------------|---------|--------|---------|----------|-----------|----------|
| | | | QTY | QTY | QTY | QTY |
| FLASHER | | | 1 | 1 | 2 | 0 |
| W20-X3L | 48"x48" | | 1 | 1 | 2 | 0 |
| W13-1 | 24"x24" | | 1 | 0 | 1 | 0 |
| FLASHER | | | 0 | 2 | 1 | 2 |
| W20-X3R | 48"x48" | | 0 | 2 | 1 | 2 |
| W13-1 | 24"x24" | | 0 | 1 | 0 | 2 |
| W6-3 | 48"x48" | | 0 | 3 | 3 | 0 |
| FLASHER | | | 23 | 23 | 25 | 23 |
| W21-4 | 48"x48" | | 23 | 23 | 25 | 23 |
| FLASHER | | | 0 | 4 | 2 | 4 |
| W21-X5L | 48"x48" | | 0 | 4 | 2 | 4 |
| FLASHER | | | 2 | 2 | 4 | 0 |
| W21-X5R | 48"x48" | | 2 | 2 | 4 | 0 |
| W21-X1 | 48"x48" | | 0 | 2 | 2 | 0 |
| G20-2 | 60"x24" | | 3 | 3 | 3 | 3 |
| REBOUNDABLE DRUM REFLECTORIZED | | | 157 | 201 | 278 | 78 |

NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B' DATED NOVEMBER, 1992.
2. PAVEMENT MARKINGS ON CSAH 1 FROM STA 167+50 TO STA 229+00, AND ON CR 132 WEST OF STA 2+65 SHALL BE PAINT. PAVEMENT MARKINGS SOUTH OF STA 167+50, NORTH OF STA 229+00, AND EAST OF STA 2+65 SHALL BE REMOVABLE LANE TAPE.
3. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
4. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. APPROXIMATE LIMITS OF PAVEMENT MARKING REMOVALS IN STAGES 1, 2 AND 3 EXTEND FROM STA 157+00 TO STA 166+00 AND FROM STA 229+00 TO STA 240+00 ON CSAH 1. PAVEMENT MARKING REMOVALS ON CR 132 IN STAGE 2 AND 3 EXTEND FROM STA 2+00 TO STA 7+00.

STAGE QUANTITIES
TRAFFIC CONTROL

REVISIONS
BY DATE