

**PART 1
ROAD
PLANS**

**SHEET
NUMBERS**

TITLE	1
TYPICAL CROSS SECTIONS	2-18
MISCELLANEOUS DETAILS	19-28
NOTE SHEET	27
STANDARD SYMBOLS	28
WITNESSES AND BENCHMARKS	29-31
ALIGNMENT	32-34
PLAN & PROFILE	35-55
MAINTAINING TRAFFIC/CONSTRUCTION STAGING	56-62
LOG OF BORINGS	63-70
SPECIAL DETAILS	71-86

**MICHIGAN
DEPARTMENT OF TRANSPORTATION**

PLANS OF PROPOSED

MICHIGAN PROJECT

CONTROL SECTION 35012

JOB NUMBER 49037 A

M-65

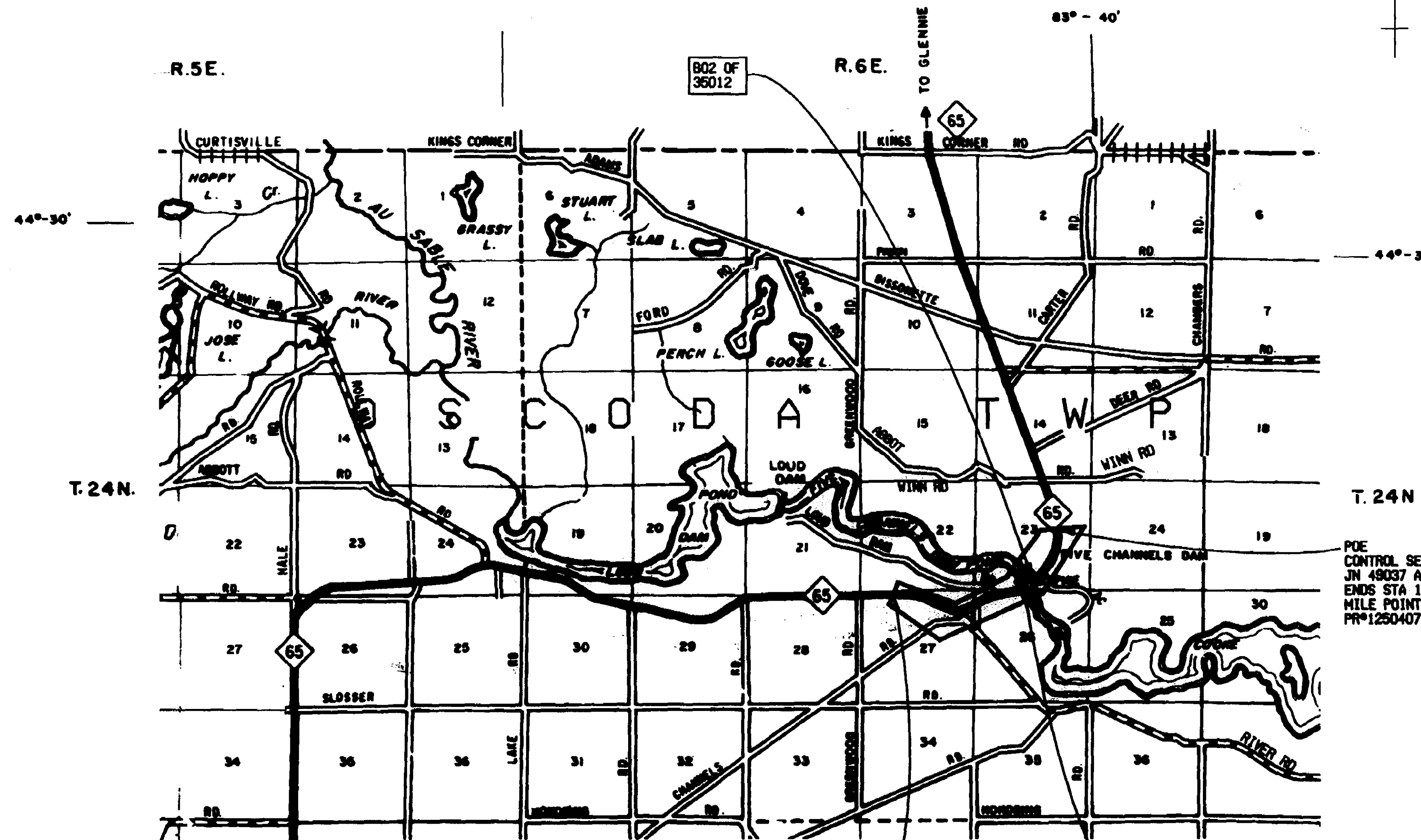
OSCODA TOWNSHIP

IOSCO COUNTY

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION INTERIM 2003 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

	YEAR 2003	YEAR 2023
A.D.T.	2350	3200
D.H.V.	400	490
COMM. %	16.2	16.2
DESIGN SPEED	60mph	
POSTED SPEED	55mph	
RIGID	1.4 MILLION	
FLEXIBLE	1.1 MILLION	

**PART 2
BRIDGE
PLANS**



M-65 CONST. & SURVEY & STATION EDUCATION
STA 963+36.24 BACK-
STA 962+89.73 AHEAD
LINE LENGTHS: 38.51'

LOAD DAM RD
STATION EDUCATION
STA 305+29.22 BACK-
STA 974+51.06 AHEAD

TITLE SHEET LEGEND

PROPOSED PROJECT	=====
EXISTING ROADS	-----
PAVED	-----
BITUMINOUS	-----
GRAVEL	-----
UNIMPROVED OR CITY STREET	-----
SECTION LINE	-----
TOWNSHIP LINE	-----
COUNTY LINE	-----
CITY OR VILLAGE LIMITS	-----
RAILROADS	-----

P.O.B.
CONTROL SECTION 35012
JN 49037 A
BEGINS STA 946+00
MILE POINT 17.733
PR#1260407

ENDS OF
35012

(1.485 Miles)

CONTRACT FOR NEW BRIDGE OVER AU SABLE RIVER & RECONSTRUCTION OF M-65 FROM SOUTH OF RIVER ROAD TO NORTH OF PINE ACRES ROAD.

APPROVALS		
RECOMMENDED FOR A	<i>Kevin O. Schaefer</i> PROJECT MANAGER	5/29/05 DATE
RECOMMENDED FOR APPROVAL	<i>[Signature]</i> RESIDENT ENGINEER	5/28/03 DATE

**MICHIGAN
DEPARTMENT OF TRANSPORTATION**
GLORIOUS SERVICE

APPROVED BY *[Signature]* 6-2-05
ENGINEER OF DEVELOPMENT DATE

MDOT

MDOT DESIGN COORDINATOR
INCLE

CC	01. SECTION	JOB NUMBER	FEDERAL NUMBERS	SHEET NO.
	35012	49037 A		1

DATE: _____ CORRECTED BY: _____ FILE NAME: 49037A.dgn

CONTROL SECTION - JOB NUMBER - 35012 - 49037 A

AS LET PLANS

FINAL R.O.V.			
AUTH	DATE	NO.	REVISION

WATER & DRAINAGE SYMBOLS

- EXISTING CATCH BASIN
- ⊖ PROPOSED CATCH BASIN
- EXISTING MANHOLE
- ⊙ PROPOSED MANHOLE
- ◁ EXISTING CULVERT END SECTION
- ◀ PROPOSED CULVERT END SECTION
- ◁ EXISTING HEADWALL
- ◀ PROPOSED HEADWALL
- ⊕ WATER SHUTOFF (Service Valve)
- GATE VALVE
- GATEWELL
- ⊕ WATER METER
- ⊗ WATER MANHOLE
- ⊙ EXISTING FIRE HYDRANT
- ⊕ PROPOSED FIRE HYDRANT
- (ADJ-HYD) ADJUST FIRE HYDRANT
- (ADJ) ADJUST DRAINAGE STRUCTURE
- (ADJ-K) ADJUST DRAINAGE STRUCTURE W/COVER
- (ADJ-B/O) ADJUST DRAINAGE STRUCTURE BY OTHERS
- (REC) RECONSTRUCT DRAINAGE STRUCTURE
- (REC-K) RECONSTRUCT DRAINAGE STRUCTURE W/COVER
- (REL-B/O) RELOCATE - BY OTHERS
- (SR-1) SIDEWALK RAMP TYPE
- ∧ CHECK DAM (PROFILES)
- ∩ DIKE (PROFILES)
- W.T. WATER TABLE (PROFILES)
- GUARD POST
- ⊕ WATER WELL

REAL ESTATE SYMBOLS

- PROPERTY OWNERSHIP ARROW
- ↗ CONTIGUOUS PROPERTY SYMBOL
- 123456 PARCEL NUMBER BOX
- PARCEL LINES

UTILITIES SYMBOLS

- POWER POLE
- TELEPHONE POLE
- GUY POLE
- ⊕ LIGHT POLE
- ⊕ POWER LIGHT POLE
- ⊕ TELEPHONE MANHOLE
- ⊕ POWER TOWER
- ⊕ GAS VALVE
- WALK/NO-WALK
- ⊕ DEADMAN FOR GUYWIRE
- R/R RAILROAD SIGNAL
- ⊕ ELECTRICAL MANHOLE
- ⊕ ELECTRICAL HANDHOLE
- ⊕ TELEPHONE PEDESTAL/RISER

MISCELLANEOUS SYMBOLS

- ⊗ RIPRAP
- ⊕ SIGN
- ⊕ STUMP
- ⊕ SWAMP
- ⊕ DECIDUOUS TREE
- ⊕ EVERGREEN TREE
- MAIL BOX
- ⊕ QUARTER CORNER
- ⊕ SECTION CORNER
- ⊕ HALF QUARTER SECTION
- ⊗ TH# TEST HOLE NO.
- ⊗ MS# MUCK SOUNDING NO.
- 123 BEAM G. R. RUN NUMBER (EXISTING)
- 123 BEAM G. R. RUN NUMBER (PROPOSED)

HAZARDOUS OR FLAMMABLE MATERIAL USED WITH UNDERGROUND GAS & ELECTRICAL LINES

CAUTION - CRITICAL UNDERGROUND UTILITY USED WITH FIBER OPTICS LINES

- PROP 36" PROPOSED CULVERT/SEWER
- EX 12" CMP EXISTING CULVERT/SEWER

UTILITY PATTERNS

- ELEC ELECTRICAL LINE
- 24" GAS GAS LINE
- 12" OIL OIL LINE
- TELE TELEPHONE LINE
- 36" WM WATER LINE
- CTV CABLE TV
- TELE FO FIBER OPTICS
- POWER TRANSMISSION LINE

R.O.W. PATTERNS

- EX. LIMITED ACCESS R.O.W.
- EXISTING R.O.W.
- PROP LIMITED ACCESS R.O.W.
- PROP FREE ACCESS R.O.W.
- SECTION LINE

TOPO PATTERNS

- HEDGE LINE
- TREE LINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARD RAIL
- PROPOSED GUARD RAIL
- DRAINAGE CRS/EDGE OF WATER
- WETLANDS AREA
- ABANDON ANY UTILITY
- CITY LIMITS
- RAILROAD
- SOUND ABATEMENT WALL
- CONCRETE MEDIAN BARRIER
- SLOPE STAKE LINE


DRIVE/APPROACH LEGEND

- CONCRETE
- HMA
- AGGREGATE

REMOVAL LEGEND

- COLD-MILLING HMA SURFACE
 - REMOVING HMA *
 - REMOVING SIDEWALK
 - REMOVING PAVEMENT
 - REMOVING CURB & GUTTER
 - REMOVING (R)
 - ABANDONING (A)
 - SAVE (S)
 - BULKHEAD (B)
 - CLEARING (C)
 - CLEANING (CL)
- * INCLUDED IN EXCAVATION, EARTH UNLESS OTHERWISE NOTED.

SPECIAL LEGEND THIS PROJECT

	LEGEND SHEET				
	DATE 01/31/03	SCALE 1" = 100'	CONT. SEC. 35012	JOB NO. 49037 A	DESIGN UNIT INCLE

50.51
40.41
33.34
29.30
24
13.14
8
1.2

DATE:
WORKED ON BY:
DATE:
CHECKED BY:
FILE NAME: 49037leg.dgn

C.S. 35012 S.O.#8746 JOB#33865D

M-65 OVER AU SABLE RIVER, 4.5 MILES SOUTH OF ALCONA COUNTY LINE

1998 SURVEY

B.M.'S LIST & DESCRIPTION

BM#	ELEVATION (METER) (FEET)	DESCRIPTION
18WR 1955	261.471 857.843	FIVE CHANNELS DAM ABOUT 3.5 MILES (5.6 KM) W. FROM ALONG STATE HIGHWAY 65, ABOUT 15.0 MILES (24.1 KM) N. AND 1.0 MILES (1.6 KM) W. FROM NATIONAL CITY, T.24 N., R.6 E., IN THE N.E. CORNER OF THE N.E. 1/4 OF SEC. 30, 33' (10.1 M) S. AND 340' (103.6 M) W. FROM CENTER OF HIGHWAY AT A T-RD S., 18' (5.5 M) W. FROM A 9" (229 mm) OAK TREE, IN CONCRETE POST STANDARD TABLET STAMPED *18 WR 1955 858* PAINTED *B.M. 858.4*
A	261.382 857.549	SET P.K. NAIL, NUT, & B.M. TAG IN 20" (508 mm) OAK, 52.0' (15.8 M) LT OF STA 811+46.
0	261.409 857.641	SET P.K. NAIL, NUT, & B.M. TAG IN N.W. ROOT OF 12" (305 mm) OAK, 78.2' (23.8 M) LT OF CENTERLINE, STA 828+57.
1	261.203 856.962	RESET P.K. NAIL, NUT, & B.M. TAG IN N. ROOT OF 12" (305 mm) OAK, 60.4' (18.4 M) RT OF M-65 CENTERLINE, STA 846+75.
2	260.864 855.850	SET P.K. NAIL, NUT, & B.M. TAG IN N.W. ROOT OF 13" (330 mm) OAK, 68.1' (20.8 M) LT OF M-65 CENTERLINE STA 864+86.
2A	260.847 855.794	FOUND P.K. NAIL, NUT, & B.M. TAG IN N.W. ROOT OF 13" (330 mm) OAK, 78' (23.8 M) RT OF CENTERLINE, STA 858+80, 41' (12.5 M) W. OF FFS 4418. (OLD BM#2)
3	260.548 854.814	SET P.K. NAIL, NUT, & TAG IN 18" (457 mm) OAK, 77.0' (23.5 M) RT OF M-65 CENTERLINE, STA 874+68.
4	259.843 852.503	SET P.K. NAIL, NUT, & B.M. TAG IN SIDE OF 31" (787 mm) OAK, 103.2' (31.5 M) RT OF M-65 CENTERLINE, STA 885+45.
5	260.092 853.318	SET P.K. NAIL, NUT, & B.M. TAG IN THE N.E. ROOT OF A 18" (457 mm) OAK 67.7' (20.6 M) S. OF M-65 CENTERLINE STA 896+02.
6	258.948 849.564	SET P.K. NAIL, NUT, & B.M. TAG IN THE N. ROOT OF A 13" (330 mm) OAK, 69.4' (21.2 M) RT OF M-65 CENTERLINE, STA 906+20.
7	258.986 849.690	RESET R.R. SPIKE IN THE N. SIDE OF A 10" (254 mm) RED PINE, 75' (22.9 M) RT OF M-65 CENTERLINE, STA 912+23, 43' (13.1 M) E. OF FFR4412. <u>M-65 CONST & SURVEY @: STA 912+03.78, OFFSET 76.45' RT.</u>
8	256.411 841.241	P.K. NAIL, NUT, & B.M. TAG IN THE S. ROOT OF A 9" (229 mm) OAK, 48.9' (14.9 M) LT OF M-65 CENTERLINE, STA 924+46. <u>M-65 CONST & SURVEY @: STA 923+21.95, OFFSET 55.12' LT.</u>
9	256.456 841.390	FOUND CHSLD SQ. ON SW CORNER OF WELL PIT 58.7' (17.9 M) LT OF M-65 CENTERLINE. STA 935+83, TOWNSHIP BLDG #3. <u>M-65 CONST & SURVEY @: STA 935+60.95, OFFSET 58.52' LT.</u>
10	256.141 840.356	R.R. SPIKE IN S. FACE OF 12" (305 mm) RED PINE, 66.8' (20.4 M) LT OF STA 944+95.
10A	256.013 839.936	FOUND P.K. NAIL, NUT, & B.M. TAG CONST. B.M. IN THE S.W. ROOT OF A 17" (432 mm) OAK, 51' (15.5 M) LT OF M-65 CENTERLINE. STA 946+76, OLD BM#9. <u>M-65 CONST & SURVEY @: STA 946+77.21, OFFSET 52.42' LT.</u>

11	254.308 834.341	FOUND P.K. NAIL, ROOFING TAG IN SOUTH ROOT OF 22" (559mm) TW. OAK 68.5' (20.9M) LT. OF EXISTING M-65 CENTERLINE STA. 956+00 <u>M-65 CONST & SURVEY @: STA 955+83.33, OFFSET 93.53' LT.</u>
17WR 1955	254.867 836.175	U.S.G.S. CONCRETE MONUMENT AND CAP 31" (9.45 M) NORTH OF DOWN RIVER RD. 1000' (304.8 M) SE OF INTER. M-65 EXISTING CENTERLINE. OSCODA, ABOUT 18.0 MI. N.W. FROM, ALONG OSCODA MONUMENT RD., ABOUT 0.75 MI. S.W. FROM 5-CHANNELS DAM, CONCRETE POST, STANDARD TABLET STAMPED *17 WR 1955 837* <u>RIVER RD CONST @: STA 108+46.76, OFFSET 33.05' LT.</u>
12	234.776 770.262	R.R. SPIKE IN S.E. SIDE OF 8" (203 mm) WHITE PINE, 103' (31.4 M) S. OF M-65 CENTERLINE, STA 963+50. <u>LOUD DAM RD CONST @: STA 302+95.69, OFFSET 66.67' LT.</u>
13	225.523 739.903	R.R. SPIKE IN S.E. SIDE OF A 30" (762 mm) WHITE PINE, 135' (41.1 M) N. OF M-65 CENTER LINE, STA 974+80.
14	221.446 726.526	R.R. SPIKE IN E. SIDE OF POWERPOLE, 44' (13.4 M) LT OF M-65 CENTERLINE, STA 979+33. <u>LOUD DAM RD CONST @: STA 980+22.42, OFFSET 41.69' LT.</u>
15	211.384 693.515	CHSLD SQUARE ON S.W. CORNER OF S.W. ABUTMENT, 29' (8.8 M) LT OF M-65 CENTERLINE, STA 985+70. <u>LOUD DAM RD CONST @: STA 994+49.57, OFFSET 29.36' LT.</u>
16	211.368 693.464	CHSLD SQUARE ON N.W. CORNER OF N.W. ABUTMENT, 28' (8.5 M) LT OF M-65 CENTERLINE, STA 988+94. <u>LOUD DAM RD CONST @: STA 997+70.54, OFFSET 26.59' LT.</u>
17	220.883 724.680	R.R. SPIKE IN S. SIDE OF POWER POLE 76' (23.2 M) LT OF M-65 CENTERLINE, STA 994+60. <u>FIVE CHANNELS RD CONST @: STA 497+71.26, OFFSET 30.57' LT.</u>
18	221.963 728.224	P.K. NAIL, NUT, & B.M. TAG IN S. ROOT OF 30" (762 mm) WHITE PINE, 125' (38.1 M) LT OF M-65 CENTERLINE STA 1014+10.
19	222.266 729.219	P.K. NAIL, NUT, & B.M. TAG IN E. ROOT OF 13" (330 mm) CEDAR, 37' (11.3 M) LT OF M-65 CENTERLINE, STA 1023+16.
20	224.797 737.520	P.K. NAIL, NUT, & B.M. TAG IN N.W. ROOT OF 11" (279 mm) SPRUCE, 41' (12.5 M) RT OF M-65 CENTERLINE, STA 1033+0. <u>M-65 CONST & SURVEY @: STA 1033+14.47, OFFSET 40.36' RT.</u>
21	235.107 771.346	R.R. SPIKE IN W. SIDE POWER POLE, 30' (9.1 M) RT OF M-65 CENTERLINE, STA 1039+10.
22	245.531 805.547	R.R. SPIKE IN W. SIDE POWER POLE, 31' (9.5 M) RT OF M-65 CENTERLINE, STA 1048+65.
23	245.686 806.054	TOP STANDARD IOSCO CO. W/DR COM TO SEC'S 14 AND 23, T24N R6E, 52' (15.8 M) RT OF M-65 CENTERLINE, STA 1052+50.
24	255.048 836.770	P.K. NAIL, NUT, & B.M. TAG IN N.W. ROOT OF A 24" (610 mm) OAK, 52' (15.8 M) RT OF M-65 CENTERLINE, STA 1063+35.
25	256.140 840.351	P.K. NAIL, NUT, & B.M. TAG IN S. ROOT OF A 9" (229 mm) OAK, 41' (12.5 M) RT OF M-65 CENTERLINE,
26	254.941 836.417	P.K. NAIL, NUT, & B.M. TAG IN W. ROOT OF A 9" (229 mm) WHITE PINE 37' (11.3 M) RT OF M-65 CENTERLINE, STA 1085+11.
27	256.108 840.249	P.K. NAIL, NUT, & B.M. TAG IN W. ROOT OF A 10" (254 mm) OAK, 46' (14.0 M) RT OF M-65 CENTERLINE, STA 1094+60.

28	258.009 846.485	P.K. NAIL, NUT, & B.M. TAG IN W. ROOT OF A 14" (356 mm) OAK, 88' (26.8 M) RT OF M-65 CENTERLINE. STA 1106+46 IN S.E. QUAD OF M-65 AND BISSONNETTE ROAD.
29	258.114 846.829	P.K. NAIL, NUT, & B.M. TAG IN S.W. ROOT OF A 10" (254 mm) OAK, 41' (12.5 M) RT OF M-65 CENTERLINE, STA 1138+56.
30	261.137 856.746	R.R. SPIKE IN S. SIDE OF A 8" (203 mm) R. PINE, 38' (11.6 M) N. OF CENTERLINE OF TRAIL, 2160' (658.4 M) W. OF 35209.
35209	260.226 853.758	CONC. MON./SURVEY CAP AT N.E. QUAD OF M-65 & FFS 4425. STA 1163+26.
BM#S34 910	261.421 857.679	FIVE CHANNELS DAM, 3.0 MI (4.83 KM) N. AND 1.5 MI (2.41 KM) W. FROM, 4.5 MI (7.24 KM) S. AND 1.0 MI (1.61 KM) E. OF GLENNIE, T. 24 N., R. 6 E., AT COR. SECS. 3,4,9, & 10, 25' (7.6 M) S. AND 18' (5.5 M) W. FROM CENTER OF N.-S. RD. AT T-RD. E., IN CONCRETE POST, A STD. *T.24 N., R. 6 E. S 34 910 1927* PAINTED B.M. 858.4.

SOIL BORING	ELEVATION METER / FEET	STATION/ DESCRIPTION
SB1	256.133 / 840.331	946+00 / PK/CENTERLINE
SB2	255.925 / 839.650	949+00 / PK/CENTERLINE
SB3	255.368 / 837.821	952+00 / PK/CENTERLINE
SB4	254.975 / 836.531	955+00 / PK/PROPOSED CENTERLINE
SB5	253.441 / 831.500	958+06 / 60D SPIKE IN 13IN OAK 36.3 FT RT OF PROPOSED CENTERLINE
SB6	251.454 / 824.980	961+05 / 60D SPIKE IN 13IN RED PINE ON PROPOSED CENTERLINE
SB7	249.776 / 819.475	963+98 / 60D SPIKE IN 7IN WHITE PINE 4.2 FT RT OF PROPOSED CENTERLINE
SB8	255.181 / 837.207	966+99 / 60D SPIKE IN 9IN OAK 4.6 FT LT OF PROPOSED CENTERLINE
SB9	254.431 / 834.747	969+96 / 60D SPIKE IN 9IN OAK 2 FT LT OF PROPOSED CENTERLINE
SB10	248.234 / 814.416	973+08 / 60D SPIKE IN 8IN OAK 7 FT RT OF PROPOSED CENTERLINE
SB11	241.277 / 791.592	975+92 / 60D SPIKE IN 13IN OAK 4 FT LT OF PROPOSED CENTERLINE
SB12	237.891 / 780.482	979+06 / 60D SPIKE IN 9IN OAK 9 FT LT OF PROPOSED CENTERLINE
SB13	247.575 / 812.255	981+88 / 60D SPIKE IN 12IN OAK 16 FT RT OF PROPOSED CENTERLINE
SB14	240.649 / 789.531	985+22 / 60D SPIKE IN 6IN PAPER 6 FT RT OF PROPOSED CENTERLINE
SB15	221.592 / 727.008	987+84 / 60D SPIKE IN 12IN PAPER 4 FT RT OF PROPOSED CENTERLINE
SB16	217.489 / 713.547	990+27 / 60D SPIKE IN 16IN RED PINE 22 FT RT OF PROPOSED CENTERLINE
SB17	209.502 / 687.343	993+82 / 60D SPIKE IN 6IN WHITE PINE 20 FT LT OF PROPOSED CENTERLINE
SB18	212.509 / 697.207	998+05 / 60D SPIKE IN 15IN BIRCH 3 FT LT OF PROPOSED CENTERLINE
SB19	221.091 / 725.364	999+85 / 60D SPIKE IN 12IN WHITE PINE 7 FT LT OF PROPOSED CENTERLINE

BENCHMARKS & WITNESSES					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
01/31/03	NONE	35012	49037 A	INCLE	R.O.W. CONST.

FINAL R.O.W.		
AUTH	DATE	REVISION

FILE NAME: 49037-wt.dgn
 CHECKED BY:
 DATE:
 WORKED ON BY:
 DATE:

FINAL R.O.W.		
AUTH	DATE	REVISION

CP*1: NORTHING 415044.1168 EASTING 19856393.6198 ELEVATION: 853.212
 STA 900+12.959 OFFSET -23.32' HVCP*601
 SET NAIL & TAG
 N 50°W 25.245m (82.82') SET NAIL \ REF. TAG 100mm J. PINE
 N 50°E 23.908m (78.44') SET NAIL \ REF. TAG 200mm R. PINE
 N 10°W 14.435m (47.36') SET NAIL \ REF. TAG 300mm OAK

HVCP*608 NORTHING 417432.4275 EASTING 19866359.6831 ELEVATION: 730.141
 STA 67+46.100 OFFSET -1.984'
 SET PK NAIL & TAG
 S 05°E 52.896m (173.54') SET NAIL \ REF. TAG GUARD POST
 S 30°E 43.881m (143.97') SET NAIL \ REF. TAG 300mm SPRUCE
 S 65°E 27.415m (89.94') SET NAIL \ REF. TAG 50mm SPRUCE

HVCP*605 NORTHING 415267.2860 EASTING 19864265.6990 ELEVATION: 748.740
 STA 30+50.579 OFFSET -23.679'
 SET PK NAIL & TAG
 S 25°W 23.366m (76.66') SET NAIL \ REF. TAG 250mm W. PINE
 S 10°E 22.251m (73.00') SET NAIL \ REF. TAG LIGHT POLE
 N 65°E 9.235m (30.30') SET NAIL \ REF. TAG P. POLE

CP*2: NORTHING 415145.3127 EASTING 19859664.9888 ELEVATION: 846.453
 STA 932+85.090 OFFSET -12.663'
 SET PK NAIL & TAG
 N 80°E 17.397m (57.08') SET NAIL \ REF. TAG P. POLE
 N 35°W 15.708m (51.54') SET NAIL \ REF. TAG 350mm OAK
 N 50°E 12.020m (39.44') SET NAIL \ REF. TAG 425mm OAK

CP*9: NORTHING 418419.3891 EASTING 19866010.6913 ELEVATION: 737.635
 STA 77+92.871 OFFSET -14.550'
 SET PK NAIL & TAG
 N 35°W 15.960m (52.36') SET NAIL \ REF. TAG 250mm SPRUCE
 S 15°W 13.391m (43.93') SET NAIL \ REF. TAG 75mm W. BIRCH
 N 70°W 3.195m (10.48') SET NAIL \ REF. TAG TOP GUARD POST

HVCP*606 NORTHING 415373.5230 EASTING 19865391.5100 ELEVATION: 697.805
 STA 42+53.385 OFFSET -34.250'
 SET PK NAIL & TAG
 N 15°W 22.600m (74.15') SET NAIL \ REF. TAG P. POLE
 S 30°E 20.289m (66.56') SET NAIL \ REF. TAG P. POLE
 N 65°E 11.355m (37.25') SET NAIL \ REF. TAG P. POLE

CP*3: NORTHING 414685.6739 EASTING 19861269.1867 ELEVATION: 839.281
 STA 949+58.620 OFFSET -16.664'
 SET PK NAIL & TAG
 N 30°W 11.126m (36.50') SET NAIL \ REF. TAG 200mm R. PINE
 N 30°E 8.437m (27.68') SET NAIL \ REF. TAG 125mm J. PINE
 DUE NORTH 7.612m (24.97') SET NAIL \ REF. TAG 300mm OAK

HVCP*609: NORTHING 418634.8409 EASTING 19865952.7736 ELEVATION: 739.321
 STA 80+15.497 OFFSET -0.000'
 SET PK NAIL & TAG
 N 50°W 18.380m (60.30') SET NAIL \ REF. TAG 150mm CEDAR
 S 35°W 14.984m (49.16') SET NAIL \ REF. TAG 125mm CEDAR
 S 80°W 11.567m (37.95') SET NAIL \ REF. TAG 200mm SPRUCE

VCP*507 NORTHING 415981.7920 EASTING 19866155.5640 ELEVATION: 724.459
 STA 52+27.018 OFFSET 30.328'
 SET PK NAIL & TAG
 N 30°W 22.340m (73.29') SET NAIL \ REF. TAG 350mm R. PINE
 S 30°E 21.901m (71.85') SET NAIL \ REF. TAG P. POLE
 S 30°W 18.674m (61.27') SET NAIL \ REF. TAG 350mm CEDAR

CP*4: NORTHING 415089.9974 EASTING 19857552.9052 ELEVATION: 848.665
 STA 911+73.145 OFFSET -27.163' HVCP*602
 SET PK NAIL & TAG
 N 50°E 23.640m (77.56') SET NAIL \ REF. TAG 100mm J. PINE
 N 40°W 16.504m (54.15') SET NAIL \ REF. TAG 250mm J. PINE
 DUE NORTH 14.418m (47.30') 25mm RE-ROD IN CONC. MON

CP*10: NORTHING 415125.2320 EASTING 19858665.1440 ELEVATION: 842.752
 STA 922+85.931 OFFSET -22.07' VCP*503
 SET PK NAIL & TAG
 N 85°E 15.777m (51.76') SW COR. OF GUTTER PAN
 N 20°E 8.509m (27.92') FACE EAST LEG STOP SIGN
 N 50°W 4.202m (13.79') SW COR. OF GUTTER PAN

CP*5: NORTHING 415125.2320 EASTING 19858665.1440 ELEVATION: 842.752
 STA 922+85.931 OFFSET -22.07' HVCP*603
 SET PK NAIL & TAG
 N 80°W 20.749m (68.07') SET NAIL \ REF. TAG 2000mm J. PINE
 N 30°W 17.709m (58.10') SET NAIL \ REF. TAG 200mm R. PINE
 N 55°E 14.141m (46.39') SET NAIL \ REF. TAG 300mm OAK

CP*11: NORTHING: 414389.3100 EASTING 19861966.0732 ELEVATION: 836.486
 STA 956+83.861 OFFSET 108.68'
 SET PK NAIL & TAG
 N 75°E 14.429m (47.34') SW COR. OF GUTTER PAN
 N 40°W 13.368m (43.86') SW COR. OF GUTTER PAN
 DUE NORTH 9.975m (32.73') FACE EAST LEG STOP SIGN

VCP*502 NORTH 1300' FROM HVCP*603
 SET PK NAIL & TAG
 DUE WEST 13.465m (44.18') SET NAIL \ REF. TAG 100mm J. PINE
 N 32°E 11.360m (37.27') SET NAIL \ REF. TAG MAIL BOX POST
 S 45°E 7.765m (25.48') SET NAIL \ REF. TAG LIGHT POLE

CP*12: NORTHING 415088.1309 EASTING 19863021.9101 ELEVATION: 796.248
 STA 17+92.245 OFFSET -30.409'
 SET PK NAIL & TAG - 192
 N 60°E 5.049m (16.56') SET NAIL \ REF. TAG GUARD RAIL SPACER
 N 85°W 3.005m (9.86') SET NAIL \ REF. TAG GUARD RAIL SPACER
 N 20°E 1.695m (5.56') SET NAIL \ REF. TAG GUARD RAIL SPACER

CP*7: NORTHING 416688.4026 EASTING 19866455.5814 ELEVATION: 729.177
 STA 59+91.412 OFFSET 15.712'
 SET PK NAIL & TAG
 N 50°W 12.166m (39.91') SET NAIL \ REF. TAG TOP GUARD POST
 S 65°E 5.550m (18.21') SET NAIL \ REF. TAG 75mm SPRUCE
 N 60°E 3.220m (10.56') SET NAIL \ REF. TAG TOP GUARD POST

CP*13: NORTHING 415199.4301 EASTING 19863296.7310 ELEVATION: 775.650
 STA 20+85.435 OFFSET -33.703'
 SET PK NAIL & TAG
 N 85°W 4.394m (14.42') SET NAIL \ REF. TAG GUARD RAIL SPACER
 N 65°E 3.489m (11.45') SET NAIL \ REF. TAG GUARD RAIL SPACER
 N 30°E 1.151m (3.78') SET NAIL \ REF. TAG GUARD RAIL SPACER

CP*8: NORTHING 417348.5909 EASTING 19866405.0906 ELEVATION: 729.760
 STA 66+52.452 OFFSET 14.432'
 SET PK NAIL & TAG
 S 20°W 47.215m (154.90') SET NAIL \ REF. TAG TOP GUARD POST
 S 45°E 17.530m (57.51') SET NAIL \ REF. TAG 50mm SPRUCE
 S 30°E 14.986m (49.17') SET NAIL \ REF. TAG 300mm SPRUCE

HVCP*604: LOUD DAM RD. WEST OF P.O.B
 SET PK NAIL & TAG
 S 60°W 10.011m (32.84') SET NAIL \ REF. TAG 100mm W. PINE
 N 60°E 10.009m (32.84') SET NAIL \ REF. TAG 250mm TW. OAK
 S 25°W 8.358m (27.42') SET NAIL \ REF. TAG 50mm SPRUCE

WITNESSES					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
01/31/03	NONE	35012	49037 A	INOLE	R.O.W CONST. 22



DATE: WORKED ON BY: CHECKED BY: FILE NAME: 49037.rvt.dgn

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

M-65 CONST & SURVEY &
 CURVE DATA
 $\Delta = 22^\circ 49' 58.90''$
 $D = 02^\circ 14' 57.00''$ RT
 $R = 2547.41'$
 $T = 514.41'$
 $L = 1015.17'$
 $E = 51.42'$
 $PC = 930+99.99$
 $PI = 936+14.40$
 $PT = 941+15.16$
 $PC X = 19859479.4658, Y = 415132.6745$
 $PI X = 19859993.5407, Y = 415151.3150$
 $PT X = 19860474.5659, Y = 414969.0097$
 PROP SUPER @ 5.3%

M-65 CONST & SURVEY &
 CURVE DATA
 $\Delta = 31^\circ 37' 47.70''$
 $D = 02^\circ 55' 16.50''$ LT
 $R = 1961.35'$
 $T = 555.56'$
 $L = 1082.76'$
 $E = 77.16'$
 $PC = 952+55.48$
 $PI = 958+11.04$
 $PT = 963+38.24$ BACK
 $= 962+99.73$ AHEAD
 $PC X = 19861540.8757, Y = 414564.8855$
 $PI X = 19862060.3770, Y = 414367.9980$
 $PT X = 19862605.9618, Y = 414472.8000$
 PROP SUPER @ 6.2%

EX M-65 &
 CURVE DATA
 $\Delta = 59^\circ 54' 14.10''$
 $D = 05^\circ 27' 24.30''$ LT
 $R = 1505.00'$
 $T = 605.04'$
 $L = 1097.80'$
 $E = 161.81'$
 $PC = 952+52.10$
 $PI = 958+57.15$
 $PT = 963+49.90$
 $PC X = 19861537.7147, Y = 414566.0823$
 $PI X = 19862103.4890, Y = 414351.6573$
 $PT X = 19862572.7149, Y = 414733.6332$
 EX SUPER @ 5.6%

RIVER RD
 CURVE DATA
 $\Delta = 38^\circ 51' 29.40''$
 $D = 09^\circ 14' 28.50''$ LT
 $R = 620.00'$
 $T = 218.69'$
 $L = 420.49'$
 $E = 37.44'$
 $PC = 101+74.46$
 $PI = 103+93.15$
 $PT = 105+94.94$
 $PC X = 19862194.0113, Y = 414266.8039$
 $PI X = 19862230.1337, Y = 414051.1175$
 $PT X = 19862393.5828, Y = 413905.8253$
 PROP SUPER @ 5.0%

(EX M-65 &)
 POT=955+00.00
 $X = 19861301.9900$
 $Y = 414655.4210$

(EX M-65 &)
 PC=952+52.10
 $X = 19861537.7147$
 $Y = 414566.0823$

(M-65 CONST & SURVEY &)
 PC=952+55.48
 $X = 19861540.8757$
 $Y = 414564.8855$

PI=958+11.04
 $X = 19862060.3770$
 $Y = 414367.9980$

PI=958+57.15
 $X = 19862103.4890$
 $Y = 414351.6573$

PT=963+38.24 BACK
 $X = 962+99.73$ AHEAD
 $X = 19862605.9618$
 $Y = 414472.8000$

PT=963+49.90
 $X = 19862572.7149$
 $Y = 414733.6332$

POT=295+50.00
 $X = 19862570.6758$
 $Y = 415359.7544$

LOUD DAM RD

SECTION LINE=
 STA 297+86.86
 $X = 19862799.8429$
 $Y = 415299.8618$

PROPERTY CONTROLLING SECTION CORNER
 $X = 19862799.8670$
 $Y = 415186.0010$

SECTION CORNER
 $X = 19862801.2950$
 $Y = 415180.5000$

SECTION LINE=
 STA 966+47.25
 $X = 19862803.3162$
 $Y = 414921.3558$

EX M-65 &

SECTION LINE=
 STA 965+03.93
 $X = 19862806.5186$
 $Y = 414511.3316$

POT=100+00.00
 RIVER RD=
 STA 958+95.23
 M-65 CONST &
 & SURVEY &
 $X = 19862165.1953$
 $Y = 414438.8633$

PC=101+74.45
 $X = 19862194.0113$
 $Y = 414266.8039$

PI=103+93.15
 $X = 19862230.1337$
 $Y = 414051.1175$

PT=105+94.94
 $X = 19862393.5828$
 $Y = 413905.8253$

POT=109+10.00
 $X = 19862629.0568$
 $Y = 413696.5090$

M-65 CONST & SURVEY &
 STATION EQUATION
 STA 963+38.24 BACK=
 STA 962+99.73 AHEAD
 LINE LENGTHENS: 38.51'

M-65 CONST & SURVEY &

POT 885+11.50
 $X = 19854893.9920$
 $Y = 414966.4050$

PROPERTY CONTROLLING SECTION CORNER
 $X = 19857548.3210$
 $Y = 415022.0440$

SECTION CORNER
 $X = 19857548.5872$
 $Y = 415004.2307$

PROPERTY CONTROLLING SECTION LINE
 $N87^\circ 53' 09'' E$
 2378.17'

SECTION LINE
 $N87^\circ 53' 24.30'' E$
 2470.00'

PC=930+99.99
 $X = 19859479.4658$
 $Y = 415132.6745$

PI=936+14.40
 $X = 19859993.5407$
 $Y = 415151.3150$

SECTION LINE=
 STA 936+39.73
 $X = 19860016.9119$
 $Y = 415095.1683$

1/4 CORNER
 $X = 19860175.3390$
 $Y = 415101.0050$

PROPERTY CONTROLLING 1/4 CORNER
 $X = 19860200.0470$
 $Y = 415119.9290$

SEE DETAIL AT BOTTOM LEFT CORNER OF THIS SHEET FOR ENLARGED VIEW OF THIS AREA.

PROPERTY CONTROLLING SECTION LINE
 STA 935+46.53
 $X = 19859924.8687$
 $Y = 415109.7712$

PROPERTY CONTROLLING SECTION LINE
 $N88^\circ 32' 39'' E$
 2600.66'

SECTION LINE
 $N88^\circ 15' 57.70'' E$
 2627.16'

PI=941+15.16
 $X = 19860474.5659$
 $Y = 414969.0097$


N&S 1/4 LINE=
 STA 938+01.85
 $X = 19860175.5240$
 $Y = 415061.7833$

M-65 CONST & SURVEY &

RIVER RD

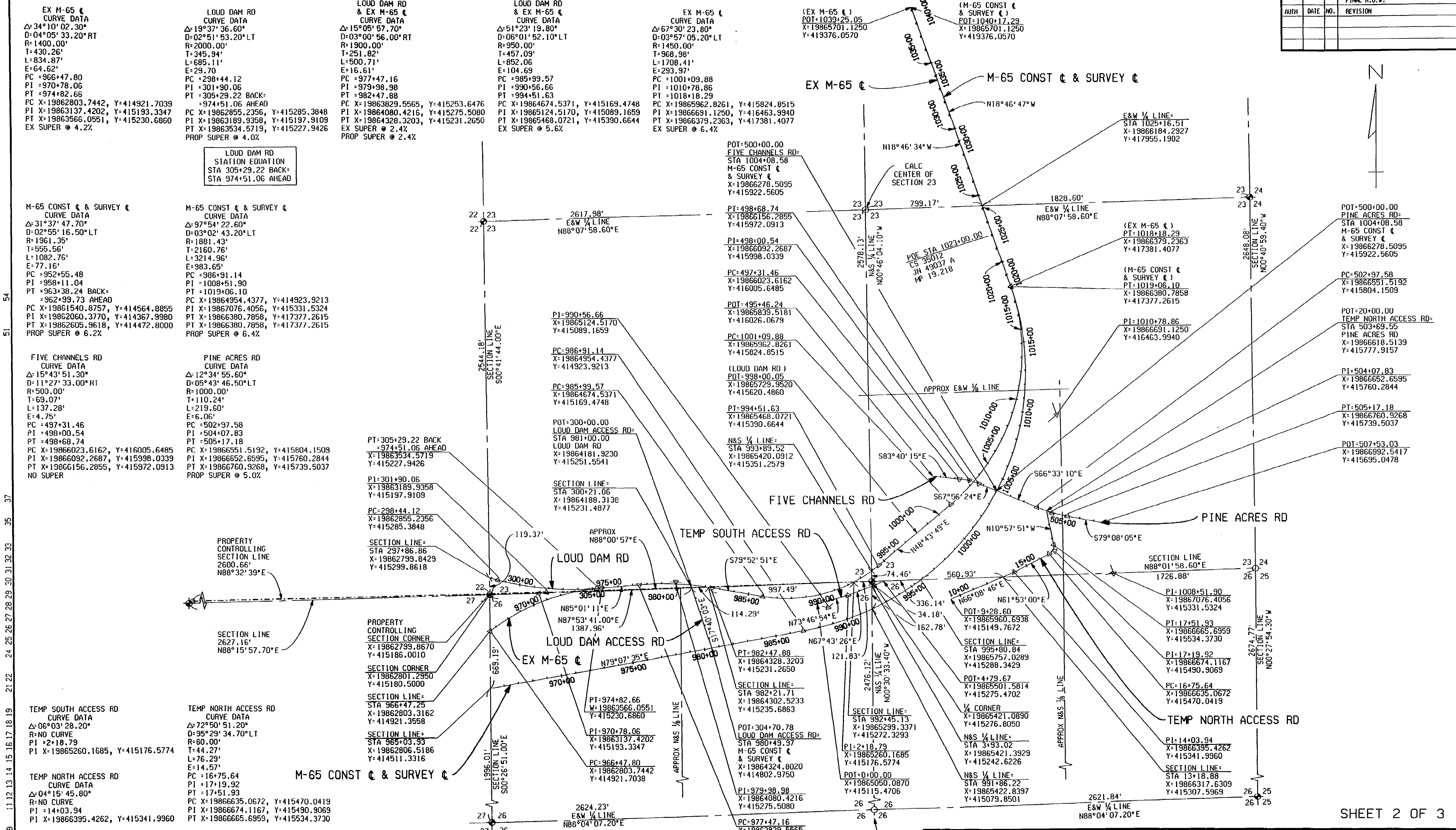
SHEET 1 OF 3

DETAIL @ 1/4 SECTION CORNER
 SCALE: 1"=600'

	ALIGNMENT MAP				
	DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT
	01/31/03	1"=300'	35012	49037 A	INGLE
					SHEET NO. R.O.W CONST. 522

CHECKED BY: WORKED ON BY: DATE: FILE NAME: 49037a1.dgn

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION



EX M-65 & SURVEY
 CURVE DATA
 $\Delta = 34^\circ 10' 02.30''$
 $D = 04^\circ 05' 33.20''$ RT
 $R = 1400.00'$
 $T = 430.26'$
 $L = 834.87'$
 $E = 64.62'$
 $PC = 966+47.80$
 $PI = 970+78.06$
 $PT = 974+82.66$
 $PC \times = 19862803.7442, Y = 414921.7039$
 $PI \times = 19863137.4202, Y = 415193.3347$
 $PT \times = 19863566.0551, Y = 415230.6860$
 EX SUPER @ 4.2%

LOUD DAM RD
 CURVE DATA
 $\Delta = 19^\circ 37' 36.60''$
 $D = 02^\circ 51' 53.20''$ LT
 $R = 2000.00'$
 $T = 345.94'$
 $L = 685.11'$
 $E = 29.70'$
 $PC = 298+44.12$
 $PI = 301+90.06$
 $PT = 305+29.22$ BACK
 $= 974+51.06$ AHEAD
 $PC \times = 19862855.2356, Y = 415285.3848$
 $PI \times = 19863189.9358, Y = 415197.9109$
 $PT \times = 19863534.5719, Y = 415227.9426$
 PROP SUPER @ 4.0%

LOUD DAM RD & EX M-65
 CURVE DATA
 $\Delta = 15^\circ 05' 57.70''$
 $D = 03^\circ 00' 56.00''$ RT
 $R = 1900.00'$
 $T = 251.82'$
 $L = 500.71'$
 $E = 16.61'$
 $PC = 977+47.16$
 $PI = 979+98.98$
 $PT = 982+47.88$
 $PC \times = 19863829.5565, Y = 415253.6476$
 $PI \times = 19864080.4216, Y = 415275.5080$
 $PT \times = 19864328.3203, Y = 415231.2650$
 EX SUPER @ 2.4%

LOUD DAM RD & EX M-65
 CURVE DATA
 $\Delta = 51^\circ 23' 19.80''$
 $D = 06^\circ 01' 52.10''$ LT
 $R = 950.00'$
 $T = 457.09'$
 $L = 852.06'$
 $E = 104.69'$
 $PC = 985+99.57$
 $PI = 990+56.66$
 $PT = 994+51.63$
 $PC \times = 19864674.5371, Y = 415169.4748$
 $PI \times = 19865124.5170, Y = 415089.1659$
 $PT \times = 19865468.0721, Y = 415390.6644$
 EX SUPER @ 5.6%

EX M-65
 CURVE DATA
 $\Delta = 67^\circ 30' 23.80''$
 $D = 03^\circ 57' 05.20''$ LT
 $R = 1450.00'$
 $T = 968.98'$
 $L = 1708.41'$
 $E = 293.97'$
 $PC = 1001+09.88$
 $PI = 1010+78.86$
 $PT = 1018+18.29$
 $PC \times = 19865962.8261, Y = 415824.8515$
 $PI \times = 19866691.1250, Y = 416463.9940$
 $PT \times = 19866379.2363, Y = 417381.4077$
 EX SUPER @ 6.4%

(EX M-65)
 CURVE DATA
 $\Delta = 103^\circ 25.05'$
 $D = 19865701.1250$
 $Y = 419376.0570$

(M-65 CONST & SURVEY)
 CURVE DATA
 $\Delta = 104^\circ 17.29'$
 $D = 19865701.1250$
 $Y = 419376.0570$

M-65 CONST & SURVEY
 CURVE DATA
 $\Delta = 31^\circ 37' 47.70''$
 $D = 02^\circ 55' 16.50''$ LT
 $R = 1961.35'$
 $T = 555.56'$
 $L = 1082.76'$
 $E = 77.16'$
 $PC = 952+55.48$
 $PI = 958+11.04$
 $PT = 963+38.24$ BACK
 $= 962+99.73$ AHEAD
 $PC \times = 19861540.8757, Y = 414564.8855$
 $PI \times = 19862060.3770, Y = 414367.9980$
 $PT \times = 19862605.9618, Y = 414472.8000$
 PROP SUPER @ 6.2%

M-65 CONST & SURVEY
 CURVE DATA
 $\Delta = 97^\circ 54' 22.60''$
 $D = 03^\circ 02' 43.20''$ LT
 $R = 1881.43'$
 $T = 2160.76'$
 $L = 3214.96'$
 $E = 983.65'$
 $PC = 986+91.14$
 $PI = 1008+51.90$
 $PT = 1019+06.10$
 $PC \times = 19864954.4377, Y = 414923.9213$
 $PI \times = 19867076.4056, Y = 415331.5324$
 $PT \times = 19866380.7858, Y = 417377.2615$
 PROP SUPER @ 6.4%


FIVE CHANNELS RD
 CURVE DATA
 $\Delta = 15^\circ 43' 51.30''$
 $D = 11^\circ 27' 33.00''$ RT
 $R = 500.00'$
 $T = 69.07'$
 $L = 137.28'$
 $E = 4.75'$
 $PC = 497+31.46$
 $PI = 498+00.54$
 $PT = 498+68.74$
 $PC \times = 19866023.6162, Y = 416005.6485$
 $PI \times = 19866092.2687, Y = 415998.0339$
 $PT \times = 19866156.2855, Y = 415972.0913$
 NO SUPER

PINE ACRES RD
 CURVE DATA
 $\Delta = 12^\circ 34' 55.60''$
 $D = 05^\circ 43' 46.50''$ LT
 $R = 1000.00'$
 $T = 110.24'$
 $L = 219.60'$
 $E = 6.06'$
 $PC = 502+97.58$
 $PI = 504+07.83$
 $PT = 505+17.18$
 $PC \times = 19866551.5192, Y = 415804.1509$
 $PI \times = 19866652.6595, Y = 415760.2844$
 $PT \times = 19866760.9268, Y = 415739.5037$
 PROP SUPER @ 5.0%

PROPERTY CONTROLLING SECTION CORNER
 SECTION LINE
 STA 297+86.86
 $X = 19862799.8429, Y = 415299.8618$

TEMP SOUTH ACCESS RD
 CURVE DATA
 $\Delta = 06^\circ 03' 28.20''$
 $D = 06^\circ 03' 28.20''$ RT
 $R = 60.00'$
 $T = 2+18.79$
 $PI \times = 19865260.1685, Y = 415176.5774$

TEMP NORTH ACCESS RD
 CURVE DATA
 $\Delta = 72^\circ 50' 51.20''$
 $D = 95^\circ 29' 34.70''$ LT
 $R = 60.00'$
 $T = 44.27'$
 $L = 76.29'$
 $E = 14.57'$
 $PC = 16+75.64$
 $PI = 17+19.92$
 $PT = 17+51.93$
 $PC \times = 19866635.0672, Y = 415470.0419$
 $PI \times = 1986674.1167, Y = 415490.9069$
 $PT \times = 1986665.6959, Y = 415534.3730$



Michigan Department of Transportation

ALIGNMENT MAP

DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
01/31/03	1" = 300'	35012	49037 A	INCLE	R.O.W. CONST. 523

1.2.3 8.9 11.12 13 14 15 16 17 18 19 21.22 24 25 26 27 28 29 30 31 32 33 35 37 51 54

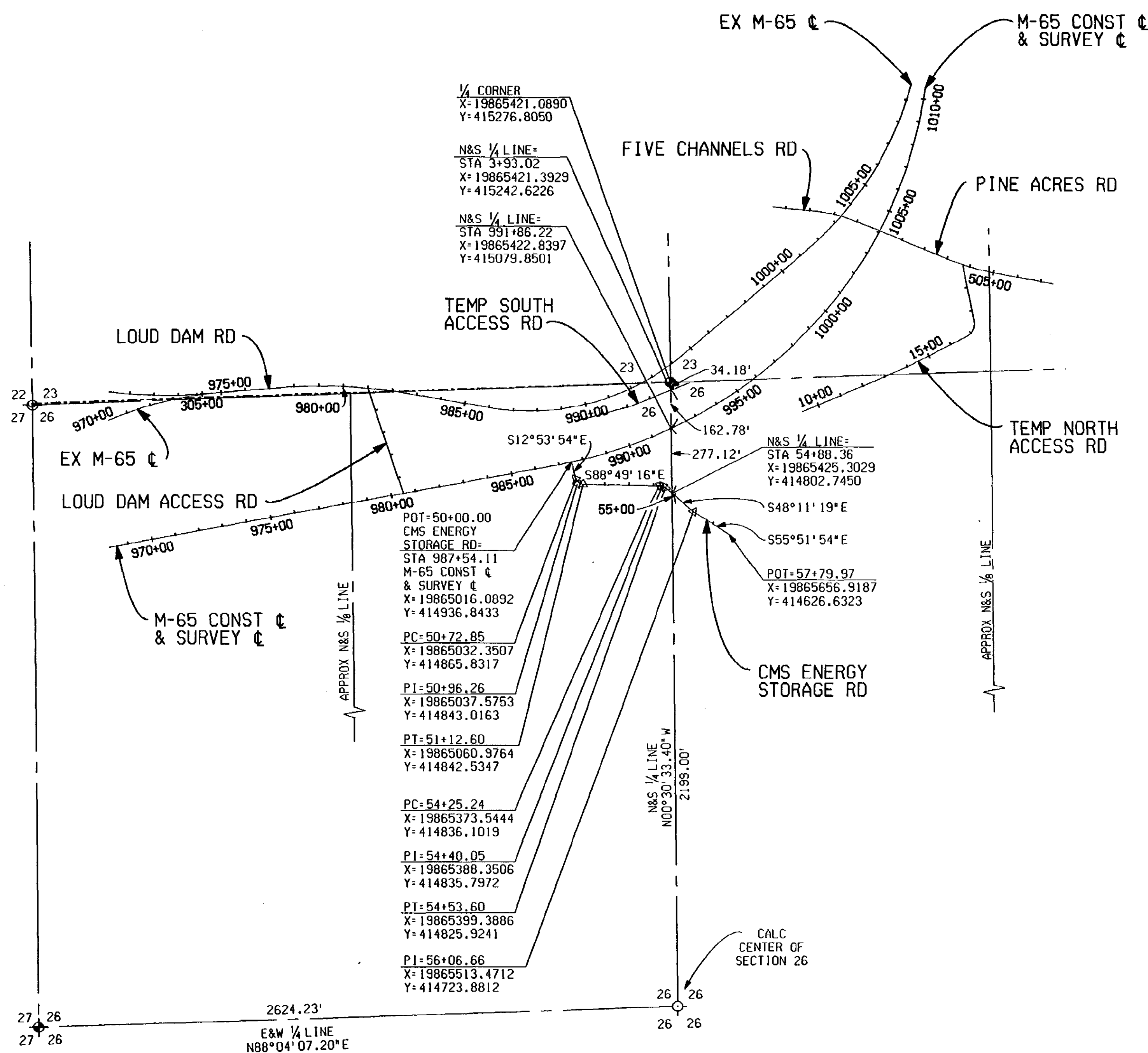
FILE NAME: 49037a12.dgn CHECKED BY: WORKED ON BY: DATE:

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

CMS ENERGY STORAGE RD
CURVE DATA
Δ: 75°55' 22.10"
D: 190°59' 09.40" LT
R: 30.00'
T: 23.41'
L: 39.75'
E: 8.05'
PC: 50+72.85
PI: 50+96.26
PT: 51+12.60
PC X: 19865032.3507, Y: 414865.8317
PI X: 19865037.5753, Y: 414843.0163
PT X: 19865060.9764, Y: 414842.5347

CMS ENERGY STORAGE RD
CURVE DATA
Δ: 40°37' 57.10"
D: 143°14' 22.00" RT
R: 40.00'
T: 14.81'
L: 28.37'
E: 2.65'
PC: 54+25.24
PI: 54+40.05
PT: 54+53.60
PC X: 19865373.5444, Y: 414836.1019
PI X: 19865388.3506, Y: 414835.7972
PT X: 19865399.3886, Y: 414825.9241

CMS ENERGY STORAGE RD
Δ: 07°40' 35.60"
R: NO CURVE
PI: 56+06.66
PI X: 19865513.4712, Y: 414723.8812



ALIGNMENT MAP @ CMS ENERGY STORAGE RD
SCALE: 1" = 300'

1.2.3 8.9 11.12 13.14 15.16.17.18.19 21.22 24.25.26.27.28.29.30.31.32.33 35 37 51 54



CHECKED BY: DATE: WORKED ON BY: DATE: FILE NAME: 49037a13.dgn

ALIGNMENT MAP					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
01/31/03	1" = 300'	35012	49037 A	INCLE	R.O.W/CONST.



M-65 CONST & SURVEY CURVE DATA
 $\Delta = 31^{\circ}37'47.70''$
 $D = 02^{\circ}55'16.50''$ LT
 $R = 1961.35'$
 $T = 555.56'$
 $L = 1082.76'$
 $E = 77.16'$
 $PC = 952+55.48$
 $PI = 958+11.04$
 $PT = 963+38.24$ BACK+
 $= 962+99.73$ AHEAD
 $PC = 19861540.8757, Y = 414564.8855$
 $PI = 19862060.3770, Y = 414367.9980$
 $PT = 19862605.9618, Y = 414472.8000$
 PROP SUPER @ 6.2%

LOUD DAM RD CURVE DATA
 $\Delta = 19^{\circ}37'36.60''$
 $D = 02^{\circ}51'53.20''$ LT
 $R = 2000.00'$
 $T = 345.94'$
 $L = 685.11'$
 $E = 29.70'$
 $PC = 298+44.12$
 $PI = 301+90.06$
 $PT = 305+29.22$ BACK+
 $= 974+51.06$ AHEAD
 $PC = 19862855.2356, Y = 415285.3848$
 $PI = 19863189.9358, Y = 415197.9109$
 $PT = 19863534.5719, Y = 415227.9426$
 PROP SUPER @ 4.0%

RIVER RD CURVE DATA
 $\Delta = 38^{\circ}51'29.40''$
 $D = 09^{\circ}14'28.50''$ LT
 $R = 620.00'$
 $T = 218.69'$
 $L = 420.49'$
 $E = 37.44'$
 $PC = 101+74.46$
 $PI = 103+93.15$
 $PT = 105+94.94$
 $PC = 19862194.0113, Y = 414266.8039$
 $PI = 19862230.1337, Y = 414051.1175$
 $PT = 19862393.5828, Y = 413905.8253$
 PROP SUPER @ 5.0%

EX M-65 CURVE DATA
 $\Delta = 59^{\circ}54'14.10''$
 $D = 05^{\circ}27'24.30''$ LT
 $R = 1505.00'$
 $T = 605.04'$
 $L = 1097.80'$
 $E = 161.81'$
 $PC = 952+52.10$
 $PI = 958+57.15$
 $PT = 963+49.90$
 $PC = 19861537.7147, Y = 414566.0823$
 $PI = 19862103.4890, Y = 414351.6573$
 $PT = 19862572.7149, Y = 414733.6332$
 EX SUPER @ 5.6%

EX M-65 CURVE DATA
 $\Delta = 34^{\circ}10'02.30''$
 $D = 04^{\circ}05'33.20''$ RT
 $R = 1400.00'$
 $T = 430.26'$
 $L = 834.87'$
 $E = 64.62'$
 $PC = 966+47.80$
 $PI = 970+78.06$
 $PT = 974+82.66$
 $PC = 19862803.7442, Y = 414921.7039$
 $PI = 19863137.4202, Y = 415193.3347$
 $PT = 19863566.0551, Y = 415230.6860$
 EX SUPER @ 4.2%

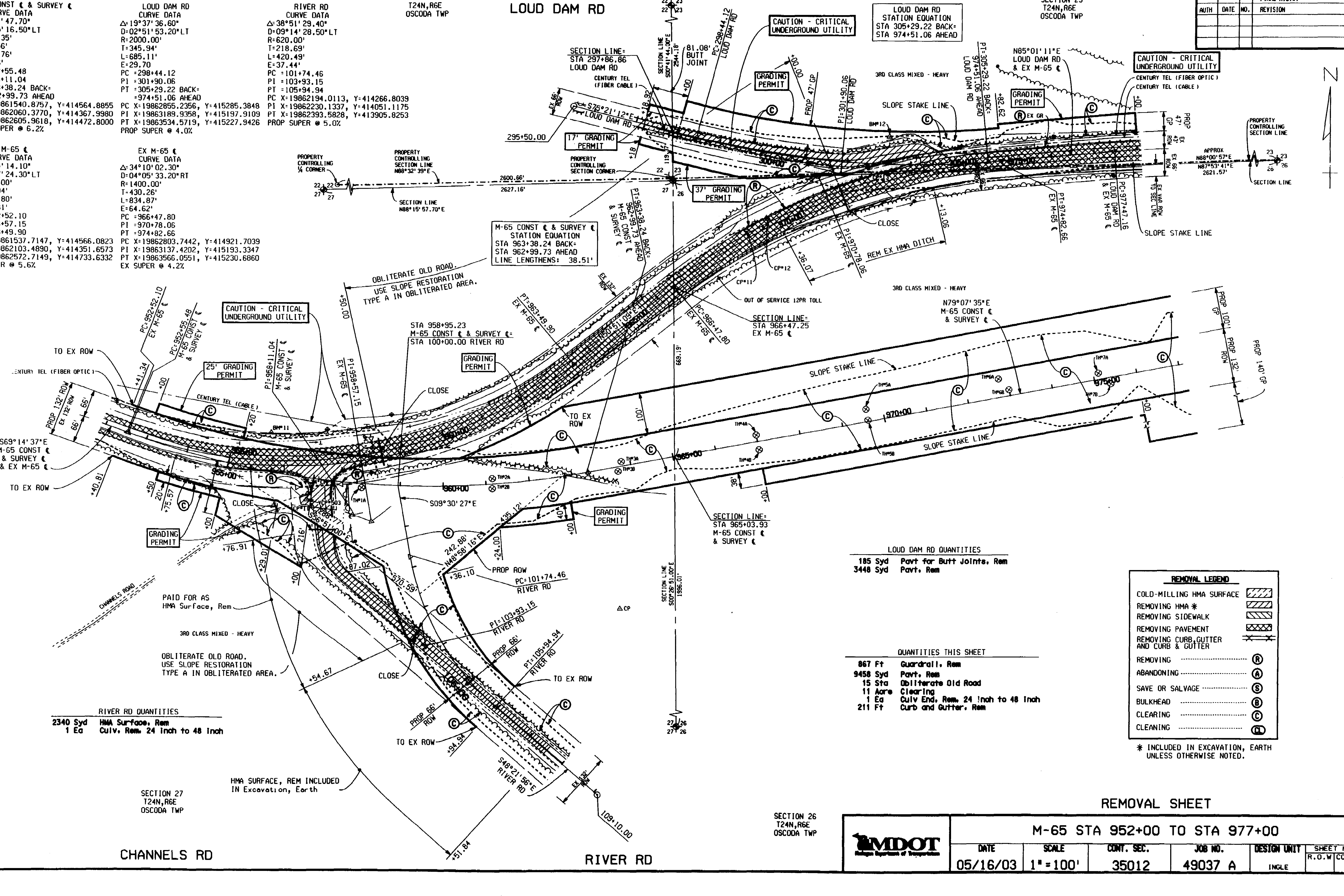
SECTION 22
 T24N,R6E
 OSCODA TWP

SECTION 23
 T24N,R6E
 OSCODA TWP

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

54
51
37
35
31
29
27
25
24
21.22
19
17
16
15
14
13
12
11
9.9

LOUD DAM RD
 WORKED ON BY: DATE: CHECKED BY: DATE: FILE NAME: 450370952.dgn



LOUD DAM RD QUANTITIES

185 Syd	Pavt for Butt Joints, Rem
3448 Syd	Pavt, Rem

QUANTITIES THIS SHEET

967 Ft	Guardrail, Rem
9458 Syd	Pavt, Rem
15 Sta	Obliterate Old Road
11 Acre	Clearing
1 Ea	Culv End, Rem, 24 Inch to 48 Inch
211 Ft	Curb and Gutter, Rem

REMOVAL LEGEND

COLD-MILLING HMA SURFACE	
REMOVING HMA *	
REMOVING SIDEWALK	
REMOVING PAVEMENT	
REMOVING CURB, GUTTER AND CURB & GUTTER	
REMOVING	(R)
ABANDONING	(A)
SAVE OR SALVAGE	(S)
BULKHEAD	(B)
CLEARING	(C)
CLEANING	(CL)

* INCLUDED IN EXCAVATION, EARTH UNLESS OTHERWISE NOTED.

RIVER RD QUANTITIES

2340 Syd	HMA Surface, Rem
1 Ea	Culv, Rem, 24 Inch to 48 Inch

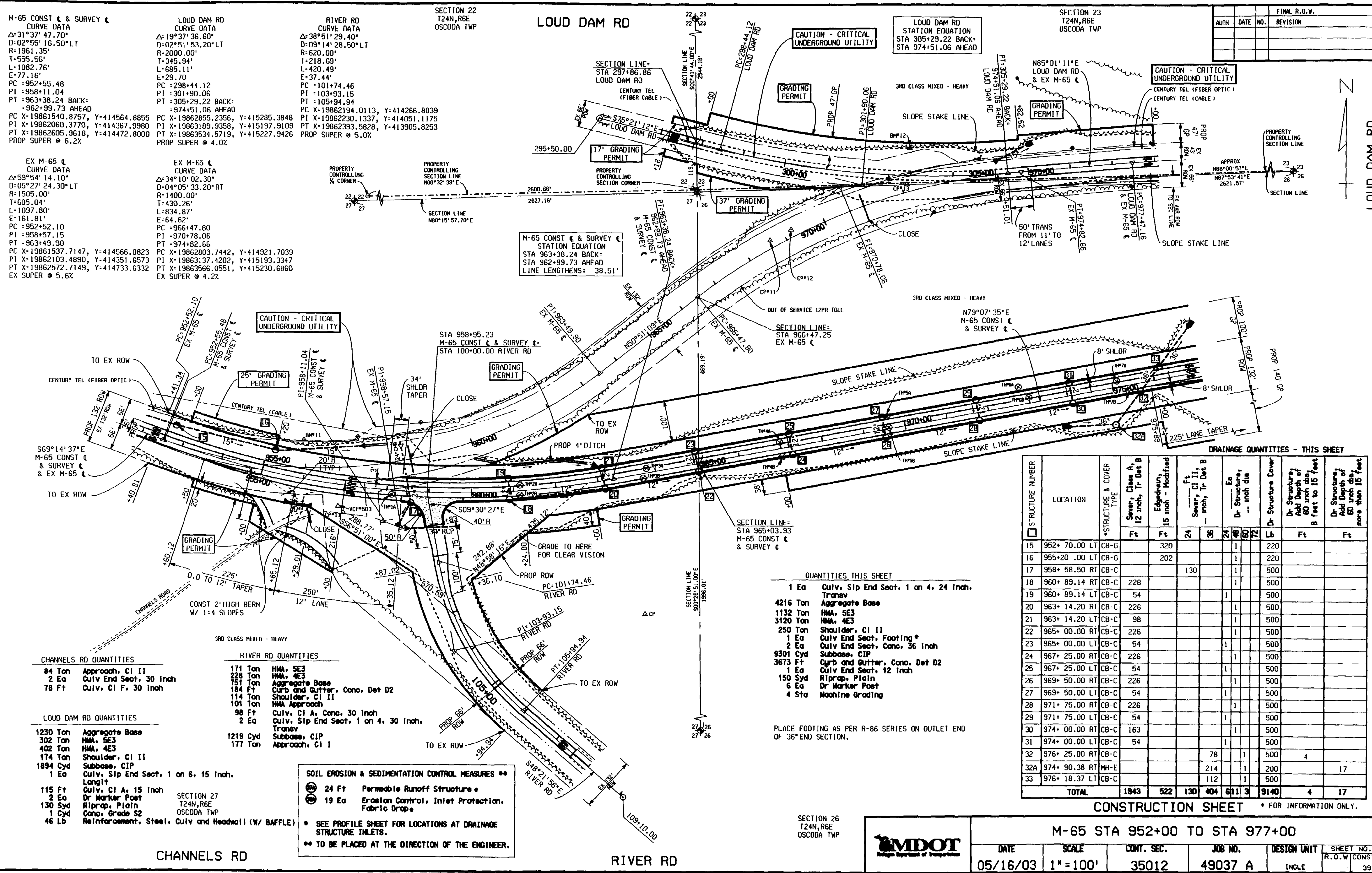
SECTION 27
 T24N,R6E
 OSCODA TWP

SECTION 26
 T24N,R6E
 OSCODA TWP

REMOVAL SHEET

M-65 STA 952+00 TO STA 977+00

	DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
	05/16/03	1" = 100'	35012	49037 A	INCLE	R.O.W CONST. 38



M-65 CONST & SURVEY
 CURVE DATA
 Δ=31°37' 47.70"
 D=02°55' 16.50" LT
 R=1961.35'
 T=555.56'
 L=1082.76'
 E=77.16'
 PC=952+55.48
 PI=958+11.04
 PT=963+38.24 BACK-
 =962+99.73 AHEAD
 PC X=19861540.8757, Y=414564.8855
 PI X=19862060.3770, Y=414367.9980
 PT X=19862605.9618, Y=414472.8000
 PROP SUPER @ 6.2%

EX M-65
 CURVE DATA
 Δ=59°54' 14.10"
 D=05°27' 24.30" LT
 R=1505.00'
 T=605.04'
 L=1097.80'
 E=161.81'
 PC=952+52.10
 PI=958+57.15
 PT=963+49.30
 PC X=19861537.7147, Y=414566.0823
 PI X=19862103.4890, Y=414351.6573
 PT X=19862572.7149, Y=414733.6332
 EX SUPER @ 5.6%

LOUD DAM RD
 CURVE DATA
 Δ=19°37' 36.60"
 D=02°51' 53.20" LT
 R=2000.00'
 T=345.94'
 L=685.11'
 E=29.70'
 PC=298+44.12
 PI=301+90.06
 PT=305+29.22 BACK-
 =974+51.06 AHEAD
 PC X=19862855.2356, Y=415285.3848
 PI X=19863189.9358, Y=415197.9109
 PT X=19863534.5719, Y=415227.9426
 PROP SUPER @ 4.0%

RIVER RD
 CURVE DATA
 Δ=38°51' 29.40"
 D=09°14' 28.50" LT
 R=620.00'
 T=218.69'
 L=420.49'
 E=37.44'
 PC=101+74.46
 PI=103+93.15
 PT=105+94.94
 PC X=19862194.0113, Y=414266.8039
 PI X=19862230.1337, Y=414051.1175
 PT X=19862393.5828, Y=413905.8253
 PROP SUPER @ 5.0%

SECTION 23
 T24N,R6E
 OSCODA TWP

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

EX M-65
 CURVE DATA
 Δ=59°54' 14.10"
 D=05°27' 24.30" LT
 R=1505.00'
 T=605.04'
 L=1097.80'
 E=161.81'
 PC=952+52.10
 PI=958+57.15
 PT=963+49.30
 PC X=19861537.7147, Y=414566.0823
 PI X=19862103.4890, Y=414351.6573
 PT X=19862572.7149, Y=414733.6332
 EX SUPER @ 5.6%

EX M-65
 CURVE DATA
 Δ=34°10' 02.30"
 D=04°05' 33.20" RT
 R=1400.00'
 T=430.26'
 L=834.87'
 E=64.62'
 PC=966+47.80
 PI=970+78.06
 PT=974+82.66
 PC X=19862803.7442, Y=414921.7039
 PI X=19863137.4202, Y=415193.3347
 PT X=19863566.0551, Y=415230.6860
 EX SUPER @ 4.2%

M-65 CONST & SURVEY
 STATION EQUATION
 STA 963+38.24 BACK-
 STA 962+99.73 AHEAD
 LINE LENGTHS: 38.51'

CHANNELS RD QUANTITIES

84 Ton	Approach, CI II
2 Ea	Culv End Sect, 30 Inch
78 Ft	Culv, CI F, 30 Inch

LOUD DAM RD QUANTITIES

1230 Ton	Aggregate Base
302 Ton	HMA, 5E3
402 Ton	HMA, 4E3
174 Ton	Shoulder, CI II
1894 Cyd	Subbase, CIP
1 Ea	Culv, Slip End Sect, 1 on 6, 15 Inch, Langit
115 Ft	Culv, CI A, 15 Inch
2 Ea	Dr Marker Post
130 Syd	Riprap, Plain
1 Cyd	Conc, Grade S2
46 Lb	Reinforcement, Steel, Culv and Headwall (W/ BAFFLE)

RIVER RD QUANTITIES

171 Ton	HMA, 5E3
228 Ton	HMA, 4E3
751 Ton	Aggregate Base
184 Ft	Curb and Gutter, Conc, Det D2
114 Ton	Shoulder, CI II
101 Ton	HMA Approach
98 Ft	Culv, CI A, Conc, 30 Inch
2 Ea	Culv, Slip End Sect, 1 on 4, 30 Inch, Transv
1219 Cyd	Subbase, CIP
177 Ton	Approach, CI I

SOIL EROSION & SEDIMENTATION CONTROL MEASURES

- 24 Ft Permeable Runoff Structure
- 19 Ea Erosion Control, Inlet Protection, Fabric Drapes

• SEE PROFILE SHEET FOR LOCATIONS AT DRAINAGE STRUCTURE INLETS.
 • TO BE PLACED AT THE DIRECTION OF THE ENGINEER.

- QUANTITIES THIS SHEET**
- 1 Ea Culv, Slip End Sect, 1 on 4, 24 Inch, Transv
 - 4216 Ton Aggregate Base
 - 1132 Ton HMA, 5E3
 - 3120 Ton HMA, 4E3
 - 250 Ton Shoulder, CI II
 - 1 Ea Culv End Sect, Footing*
 - 2 Ea Culv End Sect, Conc, 36 Inch
 - 9301 Cyd Subbase, CIP
 - 3673 Ft Curb and Gutter, Conc, Det D2
 - 1 Ea Culv End Sect, 12 Inch
 - 150 Syd Riprap, Plain
 - 6 Ea Dr Marker Post
 - 4 Sta Machine Grading

PLACE FOOTING AS PER R-86 SERIES ON OUTLET END OF 36" END SECTION.

DRAINAGE QUANTITIES - THIS SHEET

STRUCTURE NUMBER	LOCATION	STRUCTURE & COVER TYPE	Sewer, Class A, 12 inch, Tr Det B		Edge drain, 15 inch - Modified		Sewer, CI II, 12 inch, Tr Det B		Dr Structure, 12 inch dia		Dr Structure Cover		Dr Structure Add Depth of 60 inch dia, B feet to 15 feet		Dr Structure Add Depth of 60 inch dia, more than 15 feet	
			Ft	Ft	24	36	24	48	60	72	Lb	Ft	Ft	Ft		
15	952+70.00 LT	CB-G														
16	955+20.00 LT	CB-G			202											
17	958+58.50 RT	CB-C					130									
18	960+89.14 RT	CB-C	228													
19	960+89.14 LT	CB-C	54													
20	963+14.20 RT	CB-C	226													
21	963+14.20 LT	CB-C	98													
22	965+00.00 RT	CB-C	226													
23	965+00.00 LT	CB-C	54													
24	967+25.00 RT	CB-C	226													
25	967+25.00 LT	CB-C	54													
26	969+50.00 RT	CB-C	226													
27	969+50.00 LT	CB-C	54													
28	971+75.00 RT	CB-C	226													
29	971+75.00 LT	CB-C	54													
30	974+00.00 RT	CB-C	163													
31	974+00.00 LT	CB-C	54													
32	976+25.00 RT	CB-C							78							
32A	974+90.38 RT	MH-E							214							17
33	976+18.37 LT	CB-C							112							
TOTAL			1943	522	130	404	611	3	9140	4	17					

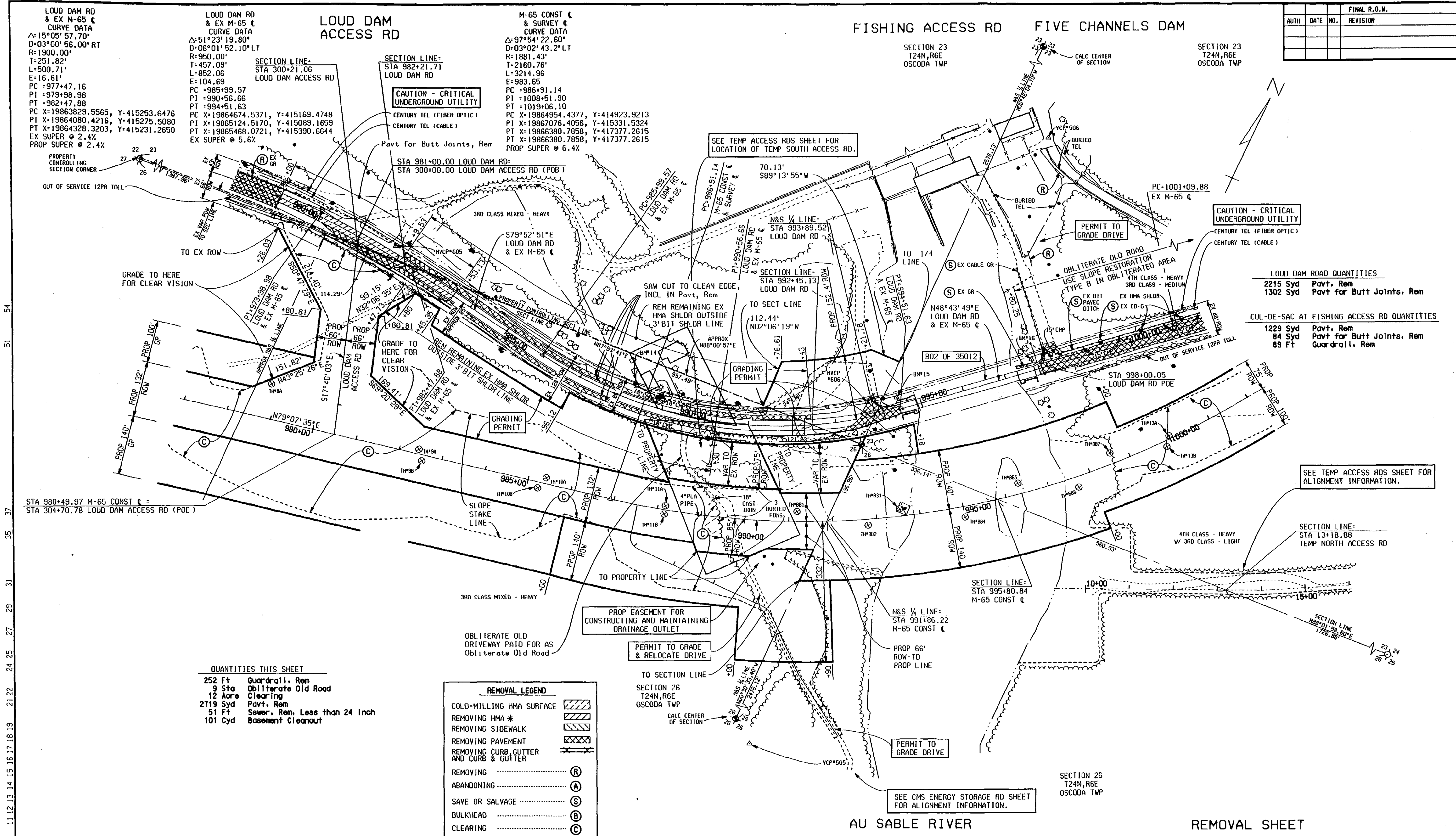
CONSTRUCTION SHEET * FOR INFORMATION ONLY.

M-65 STA 952+00 TO STA 977+00					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
05/16/03	1" = 100'	35012	49037 A	INCLE	R.O.W CONST. 39



WORKED ON BY: DATE: CHECKED BY: DATE: FILE NAME: 490370952.dgn

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION



LOUD DAM RD & EX M-65
 CURVE DATA
 $\Delta = 15^{\circ}05'57.70"$
 $D = 03^{\circ}00'56.00" RT$
 $R = 1900.00'$
 $T = 251.82'$
 $L = 500.71'$
 $E = 16.61'$
 $PC = 977+47.16$
 $PI = 979+98.98$
 $PT = 982+47.88$
 $PC X = 19863829.5565, Y = 415253.6476$
 $PI X = 19864080.4216, Y = 415275.5080$
 $PT X = 19864328.3203, Y = 415231.2650$
 $EX SUPER @ 2.4\%$
 $PROP SUPER @ 2.4\%$

LOUD DAM RD & EX M-65
 CURVE DATA
 $\Delta = 51^{\circ}23'19.80"$
 $D = 06^{\circ}01'52.10" LT$
 $R = 950.00'$
 $T = 457.09'$
 $L = 852.06'$
 $E = 104.69'$
 $PC = 985+99.57$
 $PI = 990+56.66$
 $PT = 994+51.63$
 $PC X = 19864674.5371, Y = 415169.4748$
 $PI X = 19865124.5170, Y = 415089.1859$
 $PT X = 19865468.0721, Y = 415390.6644$
 $EX SUPER @ 5.6\%$

LOUD DAM ACCESS RD

M-65 CONST & SURVEY
 CURVE DATA
 $\Delta = 97^{\circ}54'22.60"$
 $D = 03^{\circ}02'43.2" LT$
 $R = 1881.43'$
 $T = 2160.76'$
 $L = 3214.96'$
 $E = 983.65'$
 $PC = 986+91.14$
 $PI = 1008+51.90$
 $PT = 1019+06.10$
 $PC X = 19864954.4377, Y = 414923.9213$
 $PI X = 19867076.4056, Y = 415331.5324$
 $PT X = 19866380.7858, Y = 417377.2615$
 $PT X = 19866380.7858, Y = 417377.2615$
 $PROP SUPER @ 6.4\%$

FISHING ACCESS RD

FIVE CHANNELS DAM

SECTION 23
 T24N,R6E
 OSCODA TWP

QUANTITIES THIS SHEET

252 Ft	Guardrail, Rem
9 Sta	Obliterate Old Road
12 Acre	Clearing
2719 Syd	Pavt, Rem
51 Ft	Sewer, Rem, Less than 24 Inch
101 Cyd	Basement Cleanout

REMOVAL LEGEND

	COLD-MILLING HMA SURFACE
	REMOVING HMA *
	REMOVING SIDEWALK
	REMOVING PAVEMENT
	REMOVING CURB, GUTTER AND CURB & GUTTER
	REMOVING (R)
	ABANDONING (A)
	SAVE OR SALVAGE (S)
	BULKHEAD (B)
	CLEARING (C)
	CLEANING (E)

* INCLUDED IN EXCAVATION, EARTH UNLESS OTHERWISE NOTED.

LOUD DAM ROAD QUANTITIES

2215 Syd	Pavt, Rem
1302 Syd	Pavt for Butt Joints, Rem

CUL-DE-SAC AT FISHING ACCESS RD QUANTITIES

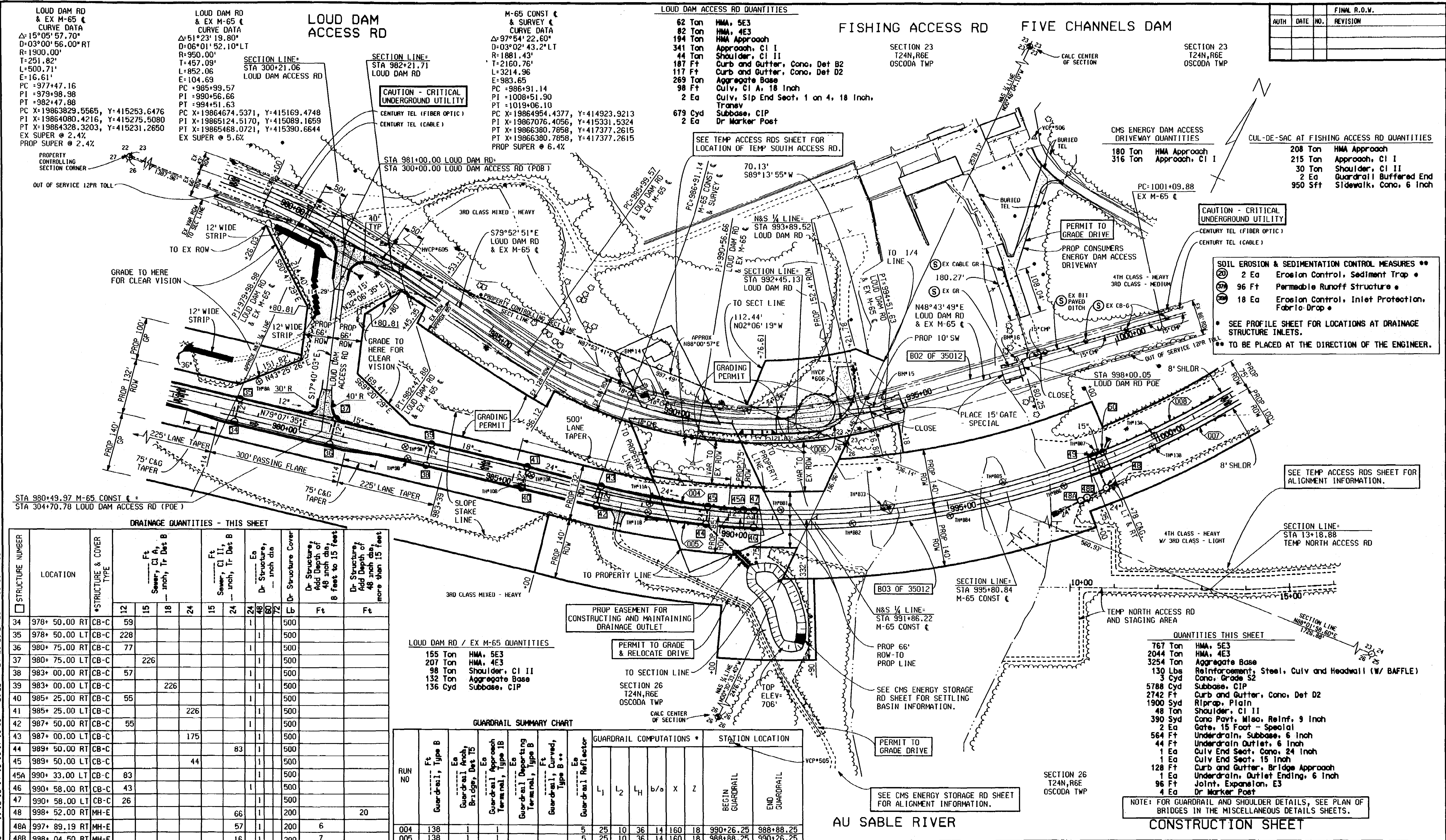
1229 Syd	Pavt, Rem
84 Syd	Pavt for Butt Joints, Rem
89 Ft	Guardrail, Rem

M-65 STA 977+00 TO STA 1002+00					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
01/31/03	1" = 100'	35012	49037 A	INCLE	534

54
51
37
35
31
29
27
25
24
22
21
19
18
17
16
15
14
13
12
11
9
8
7
6
5
4
3
2
1

DATE: _____
 MARKED ON BY: _____
 CHECKED BY: _____
 FILE NAME: 490370977.dgn

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION



DRAINAGE QUANTITIES - THIS SHEET

STRUCTURE NUMBER	LOCATION	STRUCTURE & COVER TYPE	Sewer, CI I, 18 inch, Tr Det B				Sewer, CI II, 24 inch, Tr Det B				Dr Structure, 48 inch dia, 8 feet to 15 feet		Dr Structure, 48 inch dia, more than 15 feet	
			12	15	18	24	15	24	24	48	72	Lb	Ft	Ft
34	978+ 50.00 RT	CB-C	59										500	
35	978+ 50.00 LT	CB-C	228										500	
36	980+ 75.00 RT	CB-C	77										500	
37	980+ 75.00 LT	CB-C		226									500	
38	983+ 00.00 RT	CB-C	57										500	
39	983+ 00.00 LT	CB-C			226								500	
40	985+ 25.00 RT	CB-C	55										500	
41	985+ 25.00 LT	CB-C				226							500	
42	987+ 50.00 RT	CB-C	55										500	
43	987+ 00.00 LT	CB-C					175						500	
44	989+ 50.00 RT	CB-C						83					500	
45	989+ 50.00 LT	CB-C							44				500	
45A	990+ 33.00 LT	CB-C	83										500	
46	990+ 58.00 RT	CB-C	43										500	
47	990+ 58.00 LT	CB-C	26										500	
48	998+ 52.00 RT	MH-E								66			200	20
48A	997+ 89.19 RT	MH-E								57			200	6
48B	998+ 04.50 RT	MH-E								16			200	7
49	998+ 52.00 LT	CB-D			83								465	
50	998+ 77.00 LT	CB-D			40								465	
TOTAL			683	349	226	445		222	6	14		9030	13	20

* FOR INFORMATION ONLY.

LOUD DAM RD / EX M-65 QUANTITIES

155 Ton	HMA, 5E3
207 Ton	HMA, 4E3
98 Ton	Shoulder, CI II
132 Ton	Aggregate Base
136 Cyd	Subbase, CIP

GUARDRAIL SUMMARY CHART

RUN NO	Ft	Guardrail, Type B	Ea	Guardrail Anch. Bridges, Det 15	Ea	Guardrail Approach Terminal, Type 1B	Ea	Guardrail Departing Terminal, Type B **	Ft	Guardrail, Curved, Type B **	Ea	Guardrail Reflector	GUARDRAIL COMPUTATIONS *						STATION LOCATION	
													L1	L2	LH	b/a	X	Z	BEGIN GUARDRAIL	END GUARDRAIL
004	138											5	25	10	36	14	160	18	990+26.25	988+88.25
005	138											5	25	10	36	14	160	18	988+88.25	990+26.25
006												5								
007	238											6							998+83.75	1001+21.75
008	238											5							1001+21.75	998+83.75
TOTAL	752	4	4	1	66	26														

* SEE GUARDRAIL CLEAR DISTANCE DETAIL. ** RADIUS = 100'

QUANTITIES THIS SHEET

767 Ton	HMA, 5E3
2044 Ton	HMA, 4E3
3254 Ton	Aggregate Base
130 Lbs	Reinforcement, Steel, Culv and Headwall (W/ BAFFLE)
3 Cyd	Conc, Grade S2
5788 Cyd	Subbase, CIP
2742 Ft	Curb and Gutter, Conc, Det D2
1900 Syd	Riprap, Plain
48 Ton	Shoulder, CI II
390 Syd	Conc Pavt, Misc, Reinf, 9 Inch
2 Ea	Gate, 15 Foot - Special
564 Ft	Underdrain, Subbase, 6 Inch
44 Ft	Underdrain Outlet, 6 Inch
1 Ea	Culv End Sect, Conc, 24 Inch
1 Ea	Culv End Sect, 15 Inch
128 Ft	Curb and Gutter, Bridge Approach
1 Ea	Underdrain, Outlet Ending, 6 Inch
96 Ft	Joint, Expansion, E3
4 Ea	Dr Marker Post

NOTE: FOR GUARDRAIL AND SHOULDER DETAILS, SEE PLAN OF BRIDGES IN THE MISCELLANEOUS DETAILS SHEETS.

M-65 STA 977+00 TO STA 1002+00

DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
01/31/03	1" = 100'	35012	49037 A	INCLE	R.O.W CONST. 535

MDOT Michigan Department of Transportation

2.3 8.9 11.12.13.14.15.16.17.18.19. 21.22 24.25.26.27.28 30.31.33 51 54

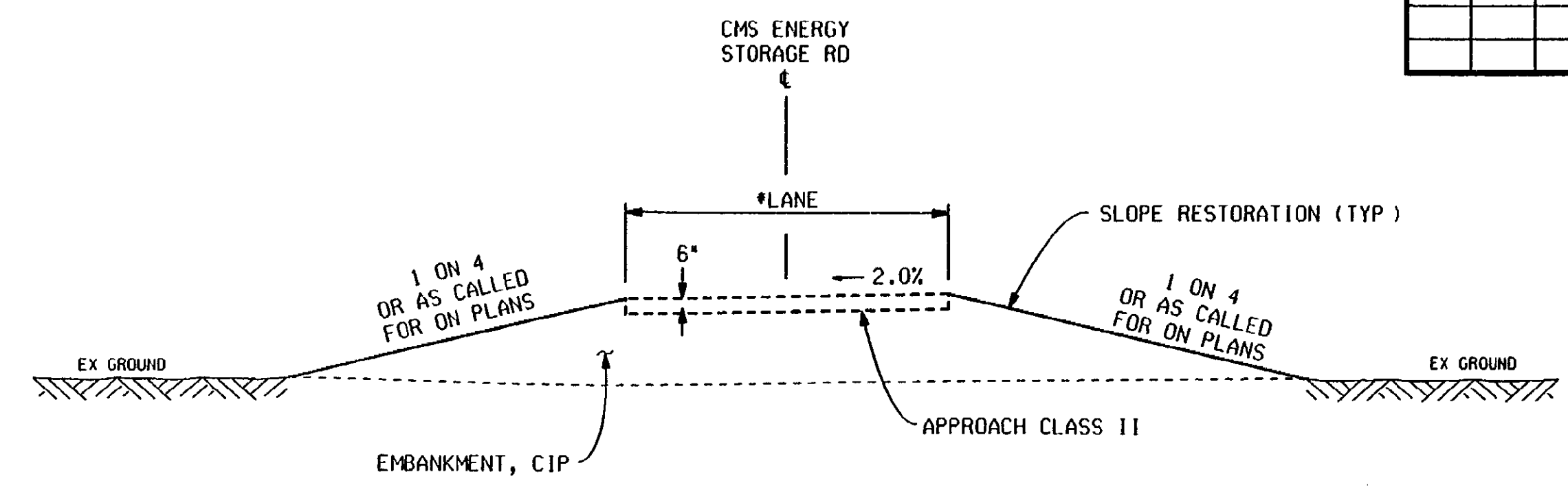
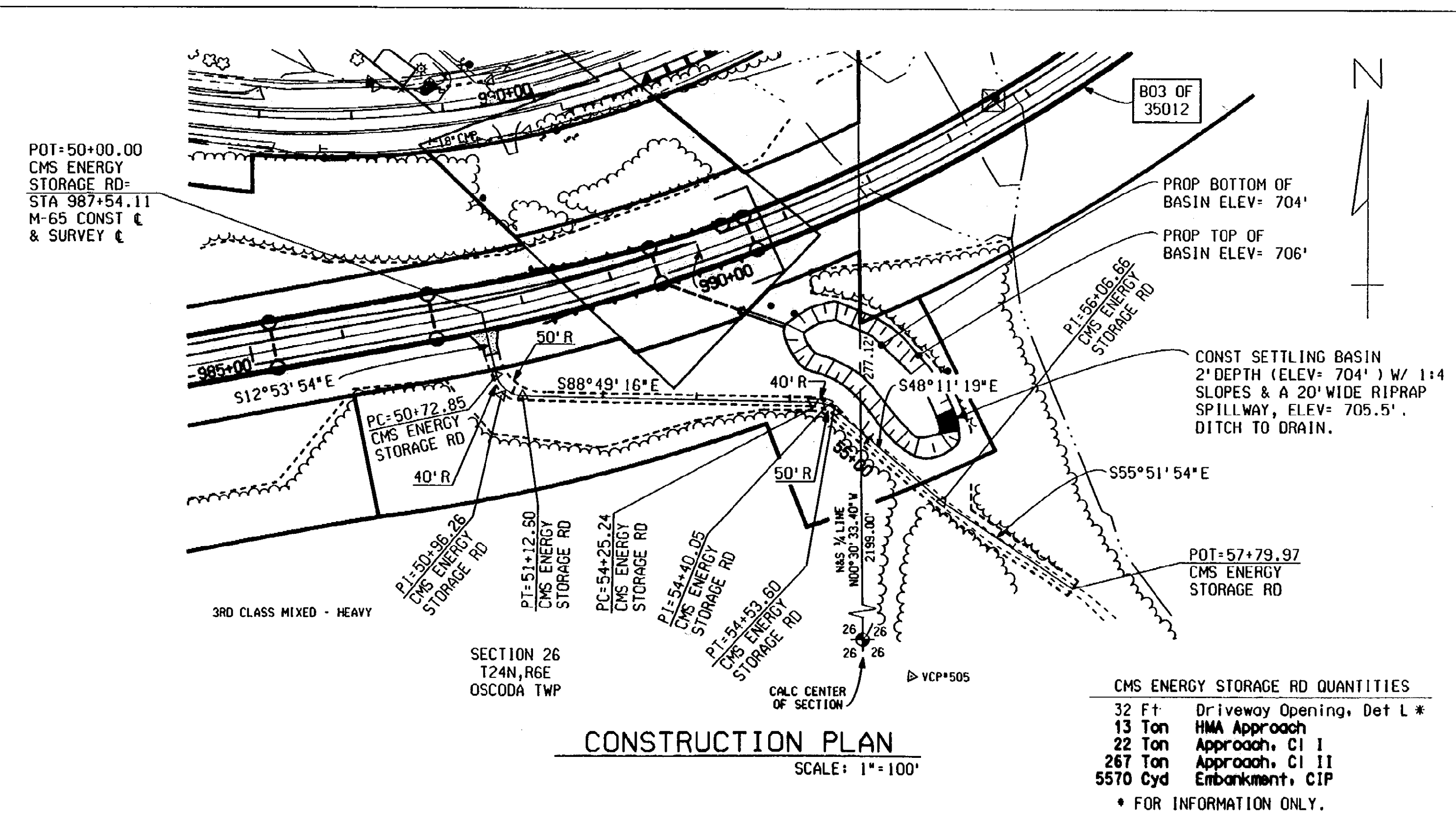
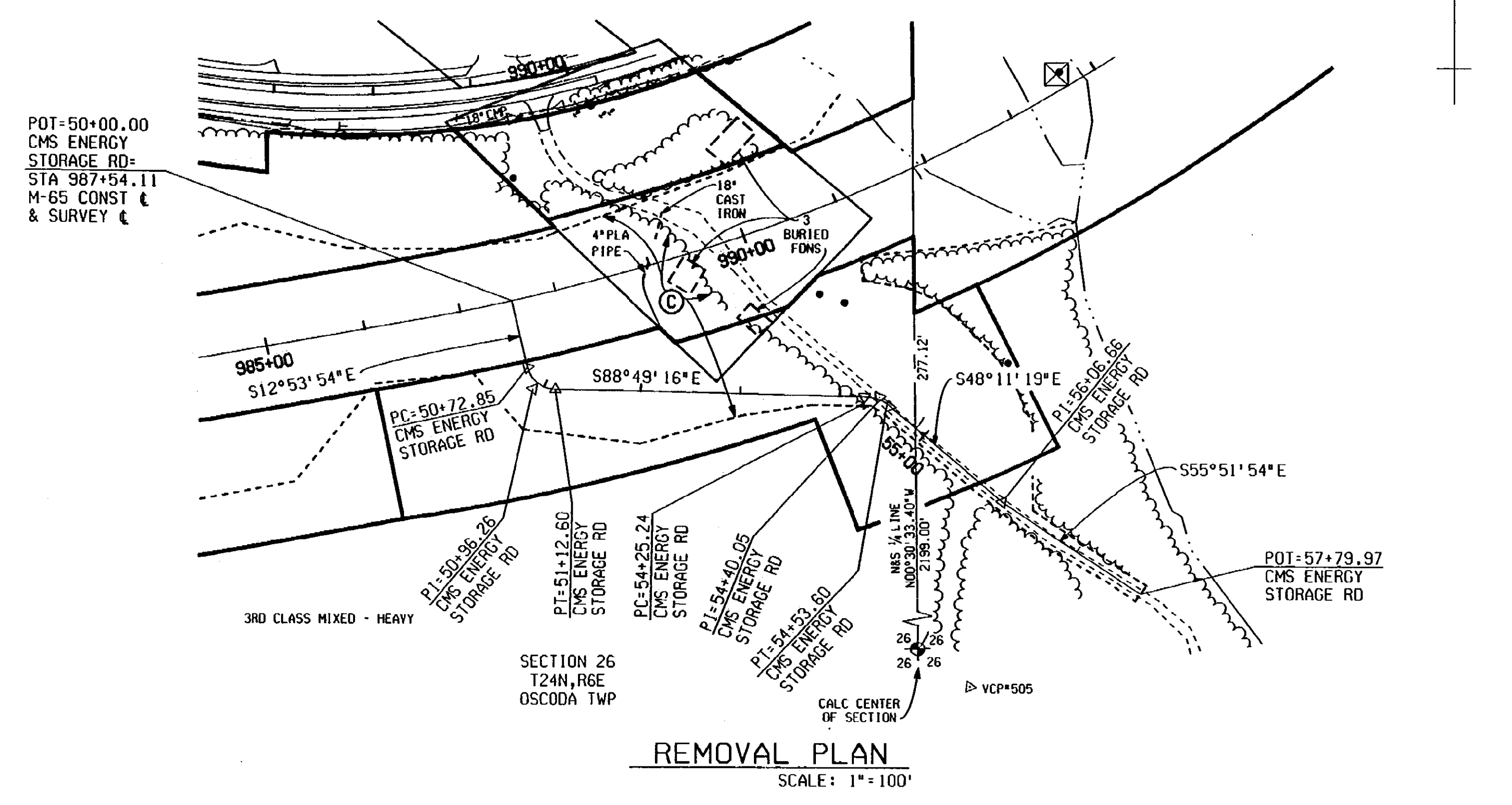
DATE: WORKED ON BY: CHECKED BY: FILE NAME: 45037097.dgn

CMS ENERGY STORAGE RD
CURVE DATA
 $\Delta=75^{\circ}55'22.10"$
 $D=190^{\circ}59'09.40"$ LT
R=30.00'
T=23.41'
L=39.75'
E=8.05'
PC =50+72.85
PI =50+96.26
PT =51+12.60
PC X=19865032.3507, Y=414865.8317
PI X=19865037.5753, Y=414843.0163
PT X=19865060.9764, Y=414842.5347

CMS ENERGY STORAGE RD
CURVE DATA
 $\Delta=40^{\circ}37'57.10"$
 $D=143^{\circ}14'22.00"$ RT
R=40.00'
T=14.81'
L=28.37'
E=2.85'
PC =54+25.24
PI =54+40.05
PT =54+53.60
PC X=19865373.5444, Y=414836.1019
PI X=19865388.3506, Y=414835.7972
PT X=19865399.3886, Y=414825.9241

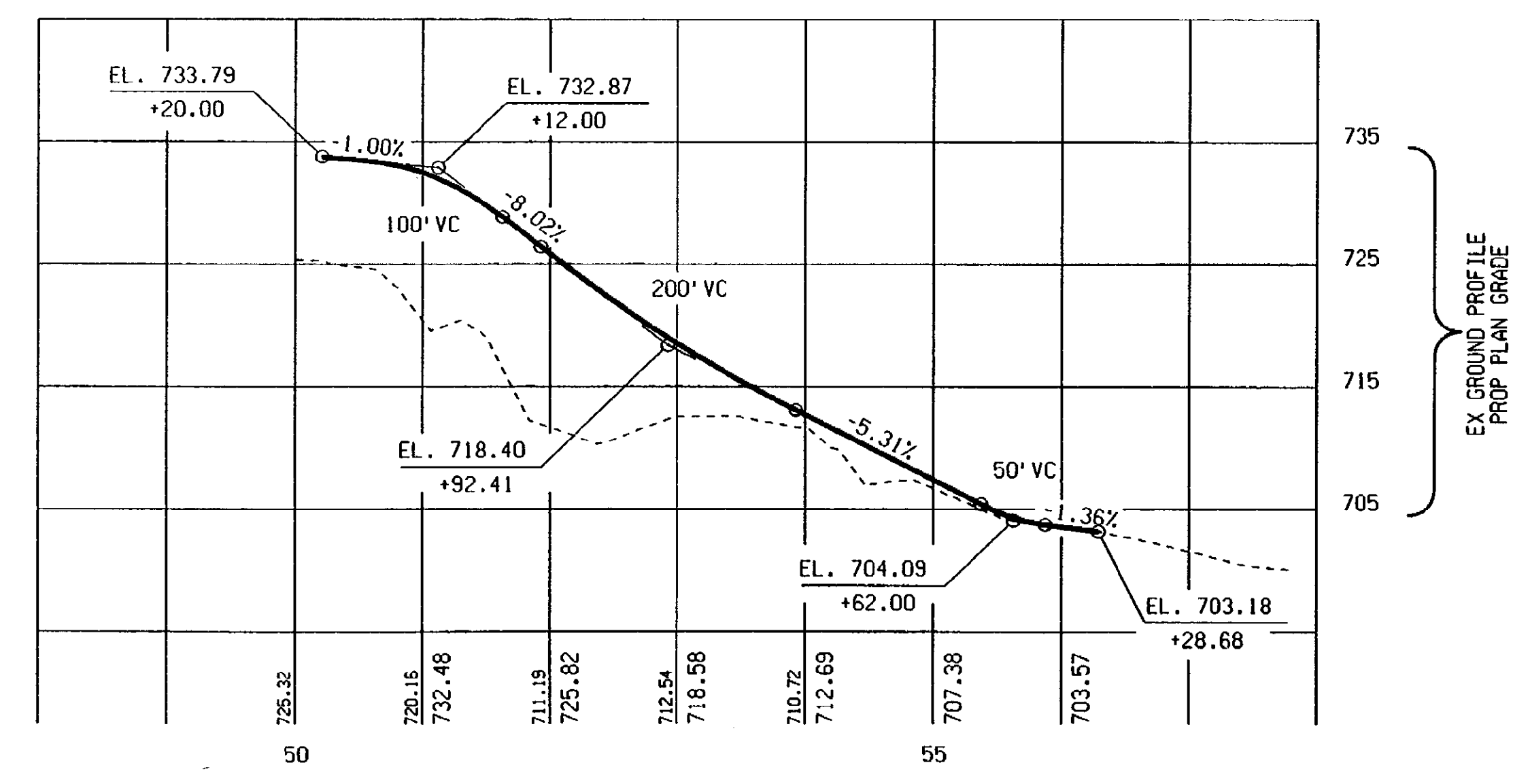
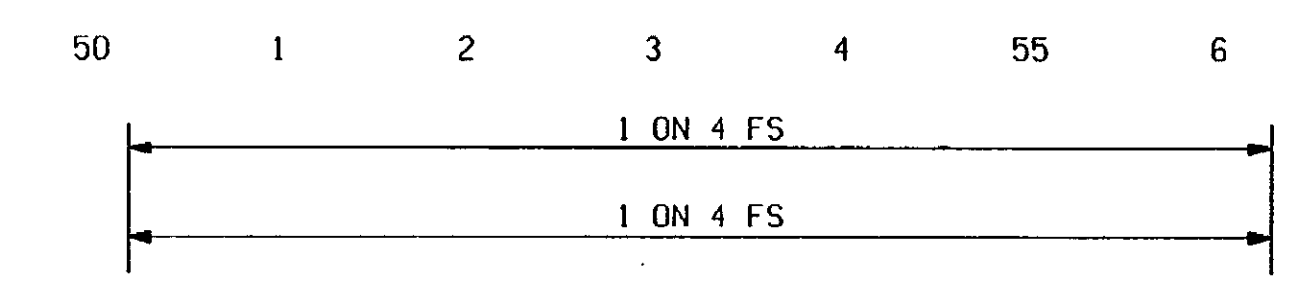
CMS ENERGY STORAGE RD
CURVE DATA
 $\Delta=07^{\circ}40'35.60"$
R=NO CURVE
PI =56+06.66
PI X=19865513.4712, Y=414723.8812

FINAL R.O.V.			
AUTH	DATE	NO.	REVISION



AT DETAIL L DRIVEWAY PLACE HMA APPROACH (5-2) & (4-3) OVER 6" OF APPROACH CLASS II AS SHOWN OF PLANS.

NOTE: CONSTRUCT APPROACH WIDTH AT 16' WIDE AND TAPER TO 10' AFTER STA 51+12.60.



CMS ENERGY STORAGE RD					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
01/31/03	AS NOTED	35012	49037 A	INCLE	547

MDOT
Michigan Department of Transportation

FILE NAME: 49037ems.dgn

CHECKED BY: DATE: WORKED ON BY: DATE:

FIVE CHANNELS RD
 CURVE DATA
 $\Delta = 15^\circ 43' 51.30''$
 $D = 11^\circ 27' 33.00''$ RT
 $R = 500.00'$
 $T = 69.07'$
 $L = 137.28'$
 $E =$
 $PC = 497+31.46$
 $PI = 498+00.54$
 $PT = 498+68.74$
 $PC X = 19866023.6162, Y = 416005.6485$
 $PI X = 19866092.2687, Y = 415998.0339$
 $PT X = 19866156.2855, Y = 415972.0913$
 NO SUPER

PC:497+31.46
 FIVE CHANNELS RD
 PI:498+00.54
 FIVE CHANNELS RD
 PT:498+68.74
 FIVE CHANNELS RD

FIVE CHANNELS RD

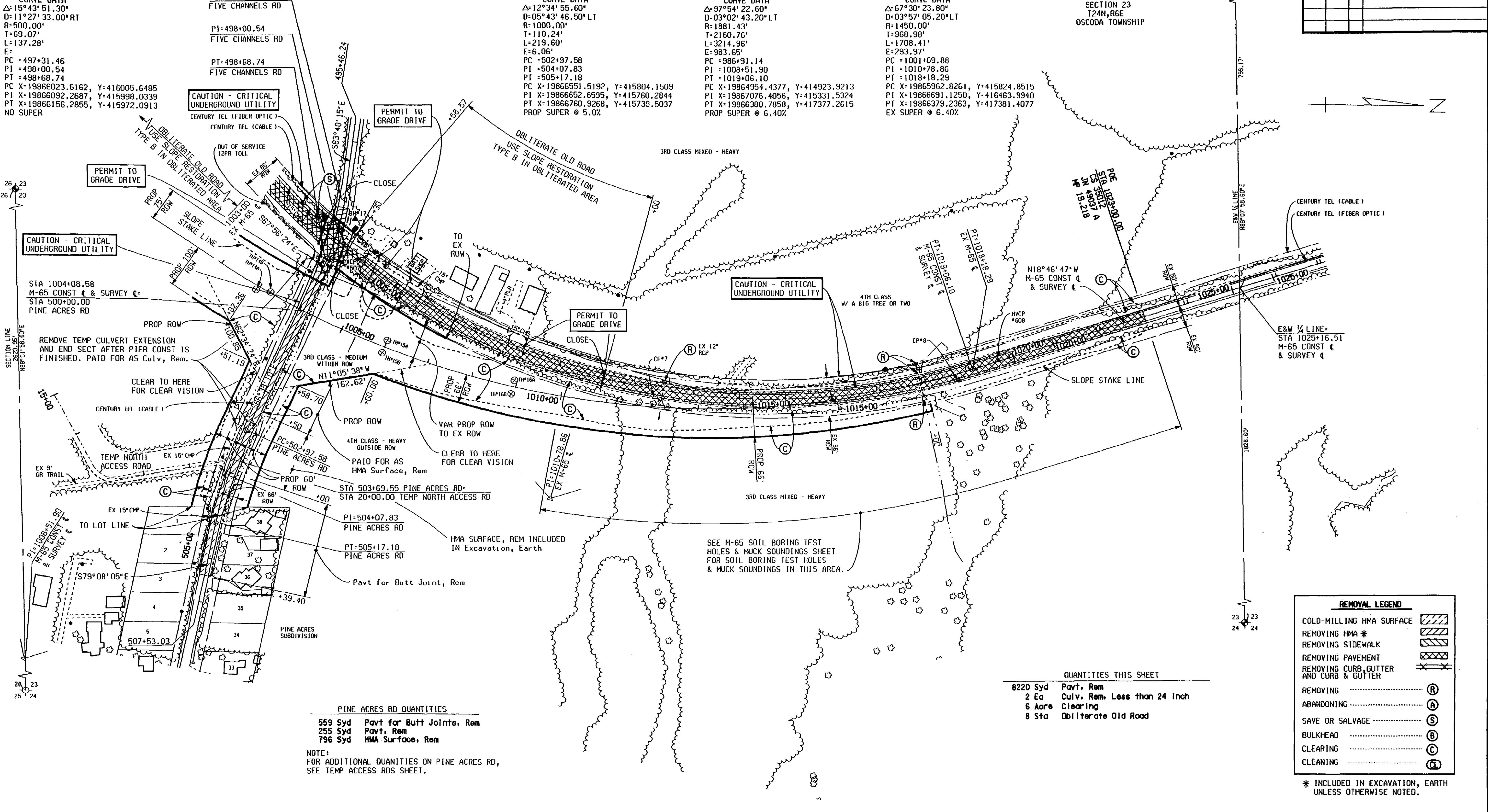
PINE ACRES RD
 CURVE DATA
 $\Delta = 12^\circ 34' 55.60''$
 $D = 05^\circ 43' 46.50''$ LT
 $R = 1000.00'$
 $T = 110.24'$
 $L = 219.60'$
 $E = 6.06'$
 $PC = 502+97.58$
 $PI = 504+07.83$
 $PT = 505+17.18$
 $PC X = 19866551.5192, Y = 415804.1509$
 $PI X = 19866552.6595, Y = 415760.2844$
 $PT X = 19866760.9268, Y = 415739.5037$
 PROP SUPER @ 5.0%

M-65 CONST & SURVEY
 CURVE DATA
 $\Delta = 97^\circ 54' 22.60''$
 $D = 03^\circ 02' 43.20''$ LT
 $R = 1881.43'$
 $T = 2160.76'$
 $L = 3214.96'$
 $E = 983.65'$
 $PC = 986+91.14$
 $PI = 1008+51.90$
 $PT = 1019+06.10$
 $PC X = 19864954.4377, Y = 414923.9213$
 $PI X = 19867076.4056, Y = 415331.5324$
 $PT X = 19866380.7858, Y = 417377.2615$
 PROP SUPER @ 6.40%

EX M-65
 CURVE DATA
 $\Delta = 67^\circ 30' 23.80''$
 $D = 03^\circ 57' 05.20''$ LT
 $R = 1450.00'$
 $T = 968.98'$
 $L = 1708.41'$
 $E = 293.97'$
 $PC = 1001+09.88$
 $PI = 1010+78.86$
 $PT = 1018+18.29$
 $PC X = 19865962.8261, Y = 415824.8515$
 $PI X = 19866691.1250, Y = 416463.9940$
 $PT X = 19866379.2363, Y = 417381.4077$
 EX SUPER @ 6.40%

SECTION 23
 T24N,R6E
 OSCODA TOWNSHIP

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION



PINE ACRES RD QUANTITIES

559 Syd	Pavt for Butt Joints, Rem
255 Syd	Pavt, Rem
796 Syd	HMA Surface, Rem

NOTE:
 FOR ADDITIONAL QUANTITIES ON PINE ACRES RD,
 SEE TEMP ACCESS RDS SHEET.

QUANTITIES THIS SHEET

8220 Syd	Pavt, Rem
2 Ea	Culv, Rem, Less than 24 Inch
6 Acre	Clearing
8 Sta	Obliterate Old Road

REMOVAL LEGEND

	COLD-MILLING HMA SURFACE
	REMOVING HMA *
	REMOVING SIDEWALK
	REMOVING PAVEMENT
	REMOVING CURB, GUTTER AND CURB & GUTTER
	REMOVING
	ABANDONING
	SAVE OR SALVAGE
	BULKHEAD
	CLEARING
	CLEANING

* INCLUDED IN EXCAVATION, EARTH UNLESS OTHERWISE NOTED.

REMOVAL SHEET

SECTION 23
 T24N,R6E
 OSCODA TOWNSHIP

	M-65 STA 1002+00 TO POE				
	DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT
	01/31/03	1" = 100'	35012	49037 A	INCLE
					SHEET NO. R.O.W CONST. 539 82

1.2.3 8.9 11.12.13.14.15.16.17.18.19 21.22 24.25 27 29 31 35 37 51 54

DATE: WORKED ON BY: CHECKED BY: FILE NAME: 49037poe.dgn

FIVE CHANNELS RD
 CURVE DATA
 $\Delta=15^{\circ}43'51.30"$
 $D=11^{\circ}27'33.00"RT$
 $R=500.00'$
 $T=69.07'$
 $L=137.28'$
 $E=$
 $PC=497+31.46$
 $PI=498+00.54$
 $PT=498+68.74$
 $PC X=19866023.6162, Y=416005.6485$
 $PI X=19866092.2687, Y=415998.0339$
 $PT X=19866156.2855, Y=415972.0913$
 NO SUPER

PC=497+31.46
 FIVE CHANNELS RD
 $PI=498+00.54$
 FIVE CHANNELS RD
 $PT=498+68.74$
 FIVE CHANNELS RD

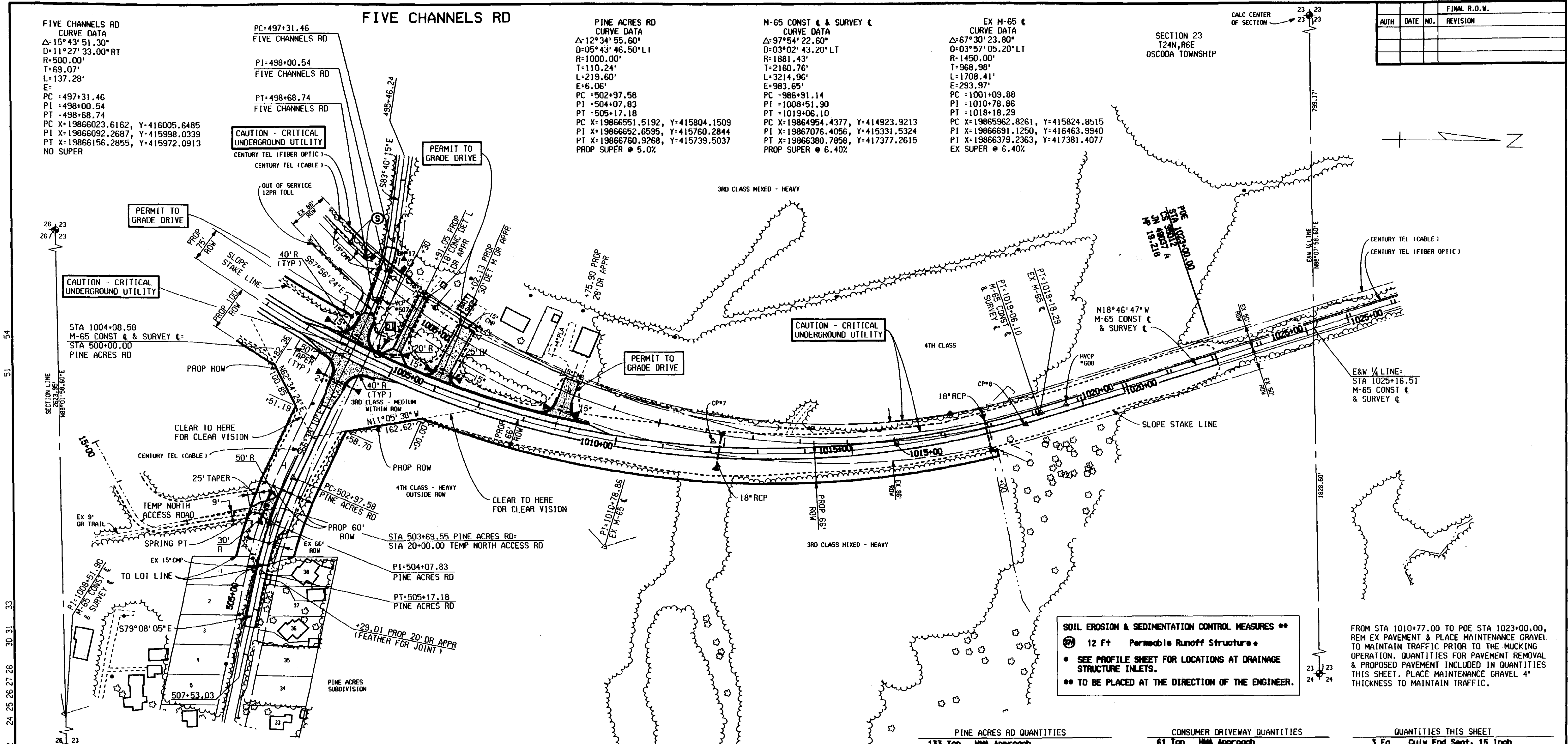
PINE ACRES RD
 CURVE DATA
 $\Delta=12^{\circ}34'55.60"$
 $D=05^{\circ}43'46.50"LT$
 $R=1000.00'$
 $T=110.24'$
 $L=219.60'$
 $E=6.06'$
 $PC=502+97.58$
 $PI=504+07.83$
 $PT=505+17.18$
 $PC X=19866551.5192, Y=415804.1509$
 $PI X=19866652.6595, Y=415760.2844$
 $PT X=19866760.9268, Y=415739.5037$
 PROP SUPER @ 5.0%

M-65 CONST & SURVEY &
 CURVE DATA
 $\Delta=97^{\circ}54'22.60"$
 $D=03^{\circ}02'43.20"LT$
 $R=1881.43'$
 $T=2160.76'$
 $L=3214.96'$
 $E=983.65'$
 $PC=986+91.14$
 $PI=1008+51.90$
 $PT=1019+06.10$
 $PC X=19864954.4377, Y=414923.9213$
 $PI X=19867076.4056, Y=415331.5324$
 $PT X=19866380.7858, Y=417377.2615$
 PROP SUPER @ 6.40%

EX M-65 &
 CURVE DATA
 $\Delta=67^{\circ}30'23.80"$
 $D=03^{\circ}57'05.20"LT$
 $R=1450.00'$
 $T=968.98'$
 $L=1708.41'$
 $E=293.97'$
 $PC=1001+09.88$
 $PI=1010+78.86$
 $PT=1018+18.29$
 $PC X=19865962.8261, Y=415824.8515$
 $PI X=19866691.1250, Y=416463.9940$
 $PT X=19866379.2363, Y=417381.4077$
 EX SUPER @ 6.40%

SECTION 23
 T24N,R6E
 OSCODA TOWNSHIP

FINAL R.O.V.		
AUTH	DATE	REVISION



SOIL EROSION & SEDIMENTATION CONTROL MEASURES **
 12 Ft Permeable Runoff Structure
 SEE PROFILE SHEET FOR LOCATIONS AT DRAINAGE STRUCTURE INLETS.
 TO BE PLACED AT THE DIRECTION OF THE ENGINEER.

FROM STA 1010+77.00 TO POE STA 1023+00.00, REM EX PAVEMENT & PLACE MAINTENANCE GRAVEL TO MAINTAIN TRAFFIC PRIOR TO THE MUCKING OPERATION. QUANTITIES FOR PAVEMENT REMOVAL & PROPOSED PAVEMENT INCLUDED IN QUANTITIES THIS SHEET. PLACE MAINTENANCE GRAVEL 4" THICKNESS TO MAINTAIN TRAFFIC.

M-65 DRIVEWAYS & PINE ACRES DRIVEWAYS - THIS SHEET

LOCATION	DRIVEWAY OPENING DET L		EMBANKMENT, CIP		Driveway Opening, Conc, Det M		HMA Approach		Curb and Gutter, Conc, Det B2		Approach, CI I		Culv, CI F, 15 inch		Culv End Sect, 15 inch		Driveway Maintenance Conc, 6 inch	
	Ft	Cyd	Ft	Ton	Ft	Ton	Ft	Ton	Ft	Ton	Ft	Ton	Ft	Ton	Ft	Ton	Ft	Ton
1004+91.05 LT	63	220		46	105	100												145
1006+02.13 LT			245	76	86	83	150	73	2									
1008+75.90 LT			160	102	73	133	121	47	2									
503+69.55 RT			50		38		66	64	2									
505+29.01 LT					5		9											
TOTAL			178	243	188	443	184	6	145									

DRAINAGE QUANTITIES - THIS SHEET

STRUCTURE NUMBER	LOCATION	STRUCTURE & COVER TYPE	Sewer, Class A, 15 inch, Tr Det B		Dr Structure, 15 inch dia		Dr Structure Cover	
			Ft	Ton	Ft	Ton	Ft	Ton
51	1004+57.50 LT	CB-J	198	1	60	72	655	
TOTAL			198	1	60	72	655	

* FOR INFORMATION ONLY.

PINE ACRES RD QUANTITIES

133 Ton	HMA Approach
246 Ton	Aggregate Base
151 Ft	Curb and Gutter, Conc, Det B2
104 Ton	HMA, 5E3
138 Ton	HMA, 4E3
88 Ft	Culv, CI A, 24 inch
2 Ea	Culv End Sect, 24 inch
85 Ton	Shoulder, CI II
227 Ton	Approach, CI I
501 Cyd	Subbase, CIP
2 Ea	Dr Marker Post

CONSUMER DRIVEWAY QUANTITIES

61 Ton	HMA Approach
100 Ton	Approach, CI I
282 Ft	Curb and Gutter, Conc, Det B2
234 Ton	Aggregate Base
63 Ton	HMA, 5E3
83 Ton	HMA, 4E3
200 Ft	Driveway Opening, Conc, Det M

QUANTITIES THIS SHEET

3 Ea	Culv End Sect, 15 inch
3308 Ton	Aggregate Base
770 Ton	HMA, 5E3
2053 Ton	HMA, 4E3
315 Ton	Shoulder, CI II
150 Ft	Culv, CI A, Conc, 18 inch
4 Ea	Culv End Sect, Conc, 18 inch
5171 Cyd	Subbase, CIP
4200 Ft	Underdrain, Subbase, 6 inch
805 Ft	Underdrain Outlet, 6 inch
7 Ea	Dr Marker Post
15 Ea	Underdrain, Outlet Ending, 6 inch
1075 Ton	Maintenance Gravel
5 Sta	Machine Grading

CONSTRUCTION SHEET

M-65 STA 1002+00 TO POE

DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
05/16/03	1"=100'	35012	49037 A	INCLE	49



SECTION 23
 T24N,R6E
 OSCODA TOWNSHIP

PINE ACRES RD

* FOR INFORMATION ONLY.
 ** EARTHWORK FOR DRIVEWAYS INCLUDED IN MAINLINE Excavation, Earth.

SECTION LINE
 26 23
 54
 51
 33
 30 31
 28
 27
 26
 25
 24
 21 22
 19
 18
 17
 16
 15
 14
 13
 12
 11
 9
 2 3

FILE NAME: 49037pos.dgn
 CHECKED BY:
 DATE:
 WORKED ON BY:
 DATE: