

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

HUR-20-16.35
LOR-20-0.00

CITY OF NORWALK
VILLAGE OF WAKEMAN
NORWALK TOWNSHIP
WAKEMAN TOWNSHIP
CAMDEN TOWNSHIP
PITTSFIELD TOWNSHIP
HURON COUNTY
LORAIN COUNTY

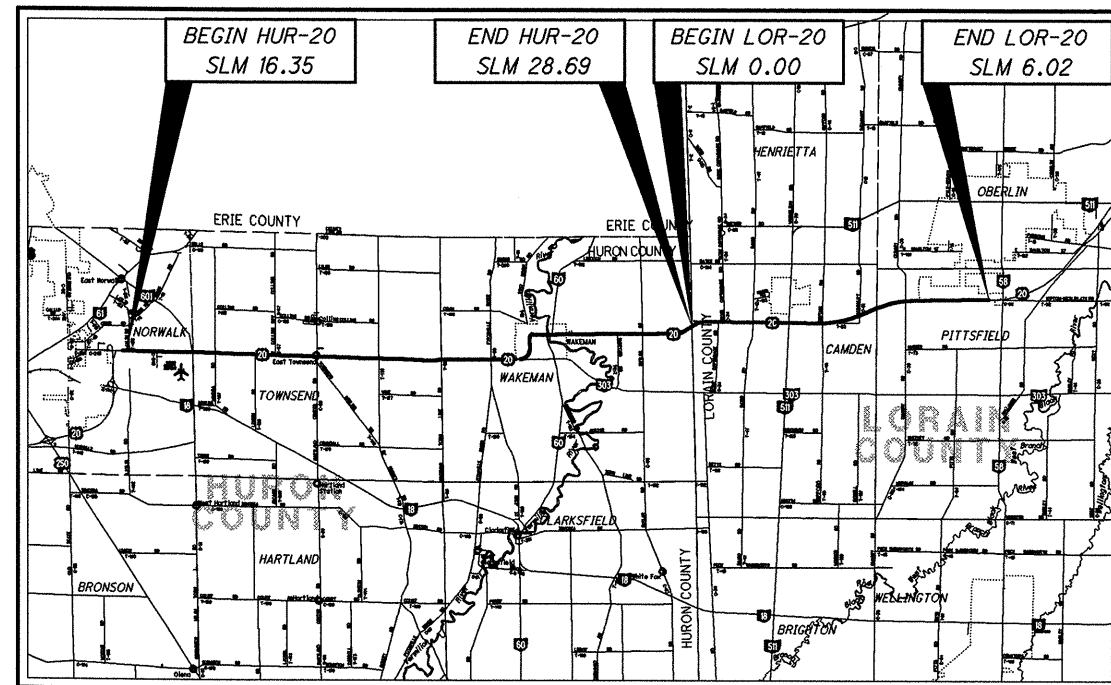
PROJECT DESCRIPTION

THIS PROJECT IS 18.36 MILES LONG AND WILL INCLUDE PAVEMENT PLANING, PAVEMENT REPAIR, SHOULDER REPAIR, RESURFACING WITH ASPHALT CONCRETE, PROFILE AND SUPERELEVATION CORRECTION IN WAKEMAN, ADDITION OF A LEFT TURN LANE AT WESTERN RESERVE SCHOOL, ADJUSTMENT OF CASTINGS WHERE NECESSARY, GUARDRAIL, PAVEMENT MARKINGS AND MINOR STRUCTURE REHABILITATION WORK.

PROJECT EARTH DISTURBED AREA: 2.3 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.9 ACRES

2005 SPECIFICATIONS

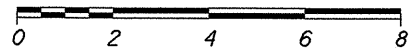
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



LOCATION MAP

LATITUDE: N 41° 15' 17" LONGITUDE: W 82° 24' 6"

SCALE IN MILES



PORTION TO BE IMPROVED _____
INTERSTATE & DIVIDED HIGHWAY _____
UNDIVIDED STATE & FEDERAL ROUTES _____
OTHER ROADS _____

DESIGN DESIGNATION

SEE SHEET 2

NHS PROJECT _____ YES

DESIGN EXCEPTIONS

NONE

INDEX OF SHEETS:

TITLE	1	WAKEMAN MAIN STREET	
DESIGN DESIGNATION	2	PLAN & PROFILE	73
STRAIGHT LINE DIAGRAM	3	CROSS SECTIONS	74-76
GENERAL NOTES	4-7		
DROP OFFS IN WORK ZONES	8	DRIVEWAY	
MAILBOX FACILITIES	9	PLAN & PROFILE	77
GENERAL SUMMARY	10-12	CROSS SECTIONS	78-79
PAVEMENT & SHOULDER DATA	13-14		
TYPICAL SECTIONS	15-16	CULVERT LOR-20-0272	
GUARDRAIL GENERAL NOTES	17-18	TYPICAL SECTIONS	80
ROADWAY SUB-SUMMARY	19	GENERAL NOTES	81
ROADWAY SUB-SUMMARY	20-26	PLAN & PROFILE	82
CURB RAMPS	27-28	CROSS SECTION	83-85
PARKING STOLL & PAV'T MARKING DETAILS	29-30	STRUCTURE PLAN & PROFILE	86
PAVEMENT MARKINGS & RPM SUB-SUMMARY	31	HEADWALL DETAIL	87
		STRUCTURES	
WESTERN RESERVE SCHOOL		STRUCTURE SUMMARY	88
ROADWAY SUB-SUMMARY	32	STRUCTURE GENERAL NOTES	89
MAINTENANCE OF TRAFFIC	32A-32D	BRIDGE TREATMENT	90
TYPICAL SECTIONS	33	PLAN VIEW LOR-20-1774	91
PROJECT SITE PLAN	33A-33D	POLYMER MOD. EXPANSION JOINT SYS.	92
PLAN & PROFILE	34-37	PLAN VIEW LOR-20-2226	93
CROSS SECTIONS	38-48, 45A, 45B	PLAN VIEW LOR-20-2283	94
TRAFFIC CONTROL	49-52	PLAN VIEW LOR-20-2562	95
		PLAN VIEW LOR-20-0217	96
WAKEMAN CURVE		POLYMER MOD. EXPANSION JOINT SYS.	97
TYPICAL SECTIONS	53-55	RIGHT OF WAY	98-107
SUPERELEVATION TABLE	56		
PLANING DEPTH DETAILS	57		
PLAN & PROFILE	58-59		
CROSS SECTIONS	60-72		

ENGINEERS SEAL:

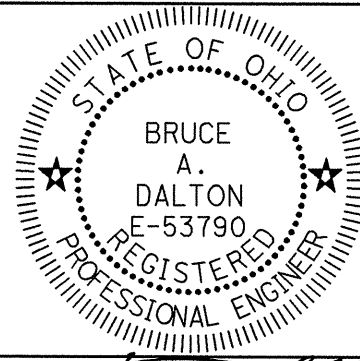
UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:



SIGNED: *Bruce Dalton*
DATE: 10-17-07

ROADWAY, PAVEMENT & STRUCTURES	STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS
	BP-3.1	7/16/04	GR-4.2	1/19/07	MT-105.11	10/18/02	
	BP-4.1	7/16/04	GR-5.1	4/18/03			
	BP-5.1	7/28/00			TC-41.20	1/19/01	800 10-19-07
	BP-7.1	1/19/07			TC-42.20	7/16/04	802 4-15-05
	CB-1.2	7/15/05	MH-1.1	7/19/02	TC-52.10	1/19/07	832 4-25-06
			RM-1.1	4/21/06	TC-52.20	1/19/07	848 4-15-05
	DM-4.3	7/19/02			TC-65.10	1/21/05	
	DM-4.4	7/19/02	MT-96.10	4/19/02	TC-65.11	1/21/05	953 4-15-05
			MT-96.20	4/19/02	TC-71.10	1/19/07	
	GR-1.1	7/16/04	MT-96.25	4/20/01	TC-72.20	1/21/05	
	GR-2.1	1/16/04	MT-97.10	9/05/06	TC-73.10	1/19/01	
	GR-2.4	4/18/03	MT-97.12	9/05/06			
	GR-3.1	1/19/07	MT-99.20m	1/30/95			
	GR-3.4	1/20/06	MT-101.20	10/18/02			
	GR-4.1	4/18/03	MT-105.10	10/18/02			

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED *John Hart*
DATE 10/19/07 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E040(593)
PID NO. 77284
CONSTRUCTION PROJECT NO. NONE
RAILROAD INVOLVEMENT NONE
HUR-20-16.35
LOR-20-0.00

DESIGN FILE: I:\projects\77284\77284GT001.dgn
WORKSTATION: mr0bins1 DATE: 10/17/2007

HUR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 16.35 TO 17.82
 CURRENT ADT (2008) 6970
 DESIGN ADT (2020) 8300
 DESIGN HOURLY VOLUME 830
 DIRECTIONAL DISTRIBUTION 53%
 TRUCKS (24 HOUR B&C) 0.24
 DESIGN SPEED/LEGAL SPEED 16.35-17.82 55 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Urban Principal Arterial
 NHS PROJECT YES
 3R PROJECT

HUR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 17.82 TO 24.69
 CURRENT ADT (2008) 6570
 DESIGN ADT (2020) 7430
 DESIGN HOURLY VOLUME 750
 DIRECTIONAL DISTRIBUTION 52%
 TRUCKS (24 HOUR B&C) 0.30
 DESIGN SPEED/LEGAL SPEED 17.82-24.57 55 MPH
 24.57-24.69 35 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial
 NHS PROJECT YES
 3R PROJECT

HUR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 24.69 TO 25.61
 CURRENT ADT (2008) 6270
 DESIGN ADT (2020) 7500
 DESIGN HOURLY VOLUME 750
 DIRECTIONAL DISTRIBUTION 52%
 TRUCKS (24 HOUR B&C) 0.28
 DESIGN SPEED/LEGAL SPEED 24.69-25.61 35 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial
 NHS PROJECT YES
 3R PROJECT

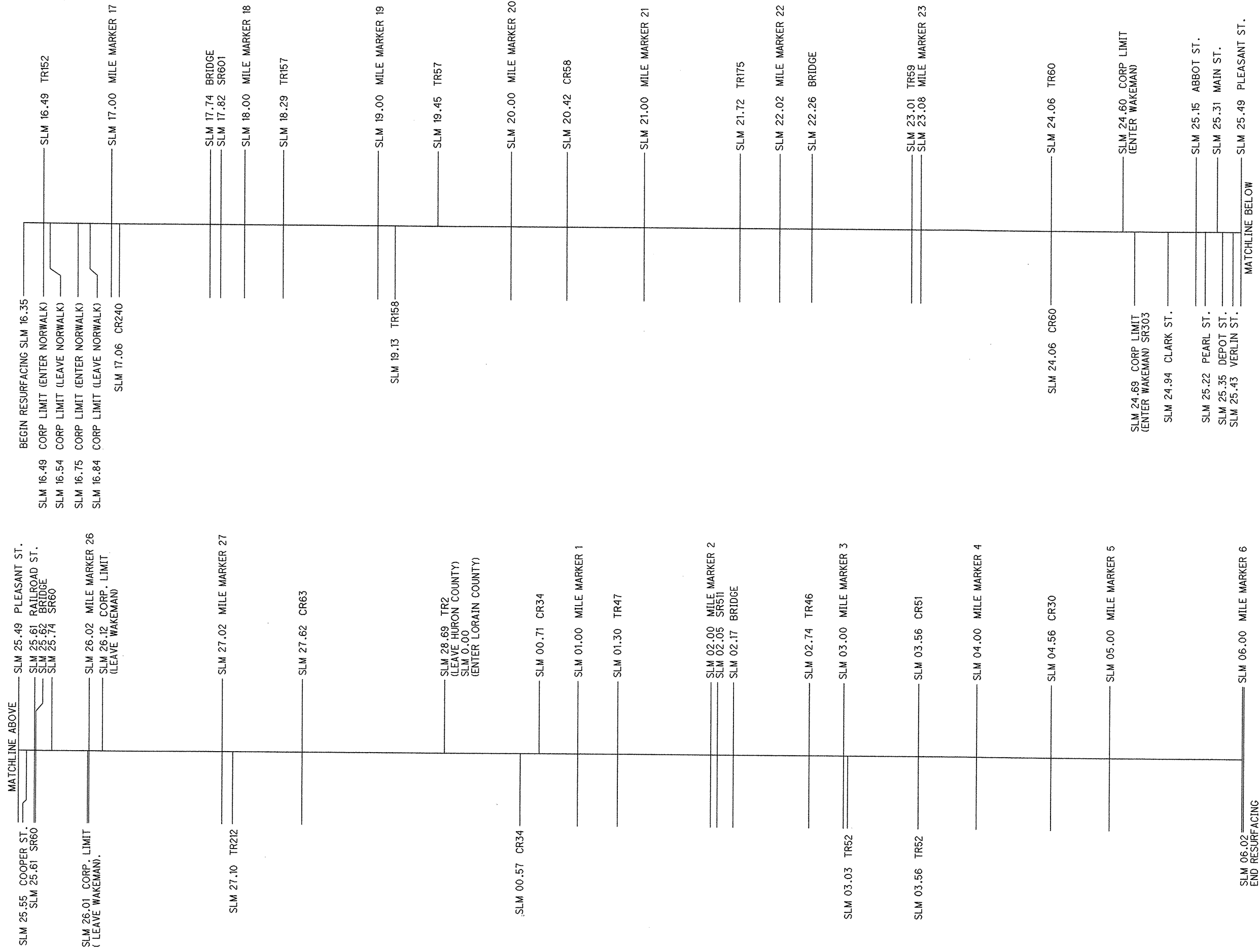
HUR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 25.61 TO 25.74
 CURRENT ADT (2008) 7850
 DESIGN ADT (2020) 9290
 DESIGN HOURLY VOLUME 840
 DIRECTIONAL DISTRIBUTION 51%
 TRUCKS (24 HOUR B&C) 0.28
 DESIGN SPEED/LEGAL SPEED 24.69-25.61 35 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial
 NHS PROJECT YES
 3R PROJECT

HUR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 25.74 TO 26.01
 CURRENT ADT (2008) 6440
 DESIGN ADT (2020) 7700
 DESIGN HOURLY VOLUME 770
 DIRECTIONAL DISTRIBUTION 54%
 TRUCKS (24 HOUR B&C) 0.29
 DESIGN SPEED/LEGAL SPEED 16.35-17.82 35 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial
 NHS PROJECT YES
 3R PROJECT

HUR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 26.01 TO 28.69
 CURRENT ADT (2008) 6550
 DESIGN ADT (2020) 8050
 DESIGN HOURLY VOLUME 800
 DIRECTIONAL DISTRIBUTION 54%
 TRUCKS (24 HOUR B&C) 0.28
 DESIGN SPEED/LEGAL SPEED 26.01-26.03 35 MPH
 26.03-28.69 55 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial
 NHS PROJECT YES
 3R PROJECT

LOR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 0.00 TO 2.05
 CURRENT ADT (2008) 7300
 DESIGN ADT (2020) 9240
 DESIGN HOURLY VOLUME 830
 DIRECTIONAL DISTRIBUTION 51%
 TRUCKS (24 HOUR B&C) 0.28
 DESIGN SPEED/LEGAL SPEED 24.69-25.61 55 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial
 NHS PROJECT YES
 3R PROJECT

LOR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 2.05 TO 6.02
 CURRENT ADT (2008) 9810
 DESIGN ADT (2020) 12740
 DESIGN HOURLY VOLUME 1270
 DIRECTIONAL DISTRIBUTION 56%
 TRUCKS (24 HOUR B&C) 0.22
 DESIGN SPEED/LEGAL SPEED 24.69-25.61 55 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial
 NHS PROJECT YES
 3R PROJECT



HUR-20-16.35
LOR-20-0.00

STRAIGHT LINE DIAGRAM

DATE: 10/1/2007
 DRAWN BY: MER
 CHECKED BY: BAD

GENERAL

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

Gas
Columbia Gas Transmission
Jim Swatzel - Senior Engineer
301 Maple Street
Sugar Grove, Ohio 43155
740-746-2297 office number
740-746-6063 cell number

Gas
Columbia Gas of Ohio
Jim Bryda
3101 North Ridge Road East
Lorain, Ohio 44055
440-240-6123 office
440-653-7133 cell

Gas
North Coast Gas Transmission
250 East Broad Street
Suite 1220
Columbus, Ohio 43215
William Cagle
614-545-0487

Gas
Buckeye Oil Pipeline Company
Don Samala
5002 Buckeye Rd. Bx 368
Emmaus, Pennsylvania, 18049

Electric
Lorain-Medina Rural Electric
Brad Warnement
P.O. Box 158
Wellington, Ohio 44090
800-222-5673
bwarnement@fesco-oh.org

Electric
Ohio Edison Company
Steve Strock
2508 West Perkins Ave.
Sandusky, Ohio 44870
419-627-6889

Water
Rural Lorain County
Water Authority
42401 SR 303, Box 567
LaGrange, Ohio 44050
440-355-6060 office
440-773-5640 cell
Jim Truesdell

Water
Northern Ohio Rural Water
P.O. Box 96
Collins, Ohio 44826
419-668-7213 office
419-668-7617 fax
Bryan Puder

Cable
Time Warner Cable
Eric Lacourse
576 Ternes Ave
Elyria, Oh 44035
440.366.0417 x642 Elyria office
216-392-7970 cell

Telephone
Verizon
Deb Hargrove
83 Townsend Avenue
Norwalk, Ohio 44857
419-744-3617 office
419-341-0631 cell

Village of Wakeman
Village Hall
Wakeman, Ohio 44889
No Phone Available
Mayor Michael DeLong

City of Oberlin
85 South Main Street
Oberlin, Ohio 44074
440-775-7206
440-775-7208 Fax
Gary Boyle, Interim City Manager

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

PROGRESSION OF WORK

- 1) WIDENING SHALL BE DONE PRIOR TO PLANING AND PAVING OPERATIONS, ONLY WITHIN THE WIDENING AREA.
- 2) WIDENING ALONG THE LEFT SIDE OF WAKEMAN CURVE SHALL BE PERFORMED PRIOR TO THE WIDENING ALONG THE RIGHT SIDE OF THE CURVE.
- 3) LINEAR GRADING SHALL BE PERFORMED AFTER PLACEMENT OF THE INTERMEDIATE COURSE AND SHOULDER RECONSTRUCTION AND PRIOR TO THE SURFACE COURSE.
- 4) WHEN REPLACING, ADJUSTING, OR RECONSTRUCTING, GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN.
- 5) GUARDRAIL WORK SHALL BE DONE AFTER WIDENING, RESURFACING, AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.

GENERAL

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ROADWAY

ITEM 209 - LINEAR GRADING

THE CONTRACTOR IS REQUIRED TO PERFORM LINEAR GRADING ON THE GRADED SHOULDER. IT IS ANTICIPATED THAT THERE ARE AREAS WHERE THE GRADED SHOULDER IS AT A HIGHER ELEVATION THAN THE ADJACENT PROPOSED PAVEMENT. PERFORM THIS WORK AFTER THE INTERMEDIATE COURSE AND SHOULDER RECONSTRUCTION AND PRIOR TO PLACING THE SURFACE COURSE. A 10:1 SLOPE SHALL BE ESTABLISHED, OR AS DIRECTED BY THE ENGINEER, WHEN PERFORMING ITEM 209 LINEAR GRADING.

ALL LABOR AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER MILE FOR ITEM 209 LINEAR GRADING.

ITEM 604 - MONUMENT BOX ADJUSTED TO GRADE

ANY UNIT OF THIS ITEM MAY BE NON-PERFORMED IF SO DIRECTED BY THE ENGINEER AND THE SURFACE SHALL BE FEATHERED TO MEET THE EXISTING CASTING OR INLET IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ADJUSTING RINGS SHALL HAVE THE ENGINEER'S APPROVAL BEFORE USING. HOWEVER, IF A UNIT IS THE ADJUSTABLE FRAME TYPE AND CAN BE ADJUSTED USING THE EXISTING FRAME, THEN THE CONTRACTOR IS ONLY ALLOWED TO ADJUST THE FRAME.

UNDER ITEM 604.03, ADJUSTMENT TO GRADE, PARAGRAPH (1), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. IT IS NOT INTENDED TO PLACE NEW FRAMES WHERE NONE CURRENTLY EXIST. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

LOCATIONS OF THE MONUMENT BOXES SHALL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING.

ITEM 604 - CASTINGS ADJUSTED TO GRADE

ANY UNIT OF THIS ITEM MAY BE NON-PERFORMED IF SO DIRECTED BY THE ENGINEER AND THE SURFACE SHALL BE FEATHERED TO MEET THE EXISTING CASTING OR INLET IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ADJUSTING RINGS SHALL HAVE THE ENGINEER'S APPROVAL BEFORE USING. HOWEVER, IF A UNIT IS THE ADJUSTABLE FRAME TYPE AND CAN BE ADJUSTED USING THE EXISTING FRAME, THEN THE CONTRACTOR IS ONLY ALLOWED TO ADJUST THE FRAME.

UNDER ITEM 604.03, ADJUSTMENT TO GRADE, PARAGRAPH (1), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. IT IS NOT INTENDED TO PLACE NEW FRAMES WHERE NONE CURRENTLY EXIST. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

ITEM 203 - EXCAVATION, AS PER PLAN

THIS ITEM SHALL BE USED TO RELOCATE THE EXISTING DITCH BEHIND THE ANCHOR ASSEMBLY REBUILT, TYPE E-98 AND IN THE AREA OF THE NEW EMBANKMENT TO ACCOMMODATE INSTALLATION OF THE ANCHOR ASSEMBLY WHILE MAINTAINING POSITIVE DRAINAGE. LOCATIONS FOR THIS ITEM ARE DESIGNATED ON THE GUARDRAIL LOCATION SHEETS. ALL WORK SHALL REMAIN WITHIN THE EXISTING RIGHT OF WAY.

WATER WORK

ITEM 638 - VALVE BOX ADJUSTED TO GRADE

ANY UNIT OF THIS ITEM MAY BE NON-PERFORMED IF SO DIRECTED BY THE ENGINEER AND THE SURFACE SHALL BE FEATHERED TO MEET THE EXISTING CASTING IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ADJUSTING RINGS SHALL HAVE THE ENGINEER'S APPROVAL BEFORE USING.

UNDER ITEM 604.03, ADJUSTMENT TO GRADE, PARAGRAPH (1), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

ADJUST VALVE BOXES TO GRADE AS PER ITEM 638.18 IN THE CMS.

PAVEMENT

ITEM 253 - PAVEMENT REPAIR

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE. CORING HAS BEEN PERFORMED TO HELP DETERMINE THE COMPONENTS THAT MAY BE ENCOUNTERED DURING THIS ITEM OF WORK.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING AND BEFORE PLACEMENT OF THE INTERMEDIATE AND SURFACE COURSE. THE REPAIR AREAS SHALL BE SAW CUT AND EXCAVATED TO PROVIDE STRAIGHT AND VERTICAL SURFACES AROUND THE PERIMETER OF THE REPAIR AREA. PAVEMENT PLANING MAY BE USED AS AN ALTERNATIVE TO SAW CUTTING AND EXCAVATING. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE ADJACENT PAVEMENT. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT WITH A MAXIMUM DEPTH OF 13", BASED ON THE PAVEMENT DESIGN AND AN AVERAGE DEPTH OF 6". THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

AFTER REMOVAL OF THE PAVEMENT, IF THE ENGINEER DETERMINES THE SUBBASE OR SUBGRADE HAS FAILED OR IS "PUMPING", THE ENGINEER SHALL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSTABLE MATERIAL AND REPLACE IT WITH ITEM 304 AGGREGATE BASE. THE MAXIMUM DEPTH OF THE EXISTING SUBBASE OR SUBGRADE REMOVED SHALL BE DETERMINED BY THE ENGINEER. ITEM 304 AGGREGATE BASE SHALL HAVE A MAXIMUM 4" LIFT. THE GRADE SHALL BE SLOPED SUCH THAT ANY WATER WILL DRAIN TO THE EXISTING UNDERDRAIN OR DITCH. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER. THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

AGGREGATE DRAINS OR UNDERDRAINS MAY BE NEEDED AS DIRECTED BY THE ENGINEER.

REPLACEMENT MATERIAL SHALL BE ITEM 301 OR ITEM 448, TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 448 TYPE 2 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 0" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH THE PAVEMENT REPAIR SHALL BE COATED WITH PG GRADE LIQUID ASPHALT (SIDES AND BOTTOM) AT AN APPLICATION RATE OF 0.25 GAL. PER SQ. YD. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 253, PAVEMENT REPAIR.

HURON FED/STATE = 99.4% CITY = .6%

ITEM 253 PAVEMENT REPAIR FED/STATE = 3922 C.Y. CITY = 24 C.Y.

LORAIN

ITEM 253 PAVEMENT REPAIR 2732 C.Y.

THE FOLLOWING ITEMS LISTED BELOW ARE ADDITIONAL ITEMS NOT INCLUDED IN ITEM 253. THESE ITEMS SHALL BE USED FOR THE REPAIR AND/OR REPLACEMENT OF DAMAGED SUBBASE/SUBGRADE EXPOSED DURING THE PROCESS OF ITEM 253 PAVEMENT REPAIR WORK INCLUDED IN THIS PLAN.

ITEM 203 EXCAVATION
ITEM 204 SUBGRADE COMPACTION
ITEM 304 AGGREGATE BASE
ITEM 605 6" UNCLASSIFIED PIPE UNDERDRAINS
ITEM 605 AGGREGATE DRAINS

CALCULATED
MER
CHECKED
BAD

GENERAL NOTES

HUR - 20 - 16 - 35
LOR - 20 - 0 - 00

4
107

PAVEMENT

ITEM 442. ASPHALT CONCRETE SURFACE COURSE, 12.5 MM. TYPE A (446)

ALL LONGITUDINAL PAVEMENT JOINTS SHALL BE CLOSED BEFORE THE END OF EACH WORK DAY. BEFORE THE JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT W8-11-36 (UNEVEN LANES) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS. PLACEMENT OF THESE SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

AFTER PLACING THE SURFACE COURSE IN ONE LANE, THE LONGITUDINAL JOINT SHALL BE TACKED ON THE VERTICAL FACE PRIOR TO PLACING THE ADJACENT SURFACE COURSE. IN ADDITION TO SECTION 401.14 AND STANDARD DRAWING BP-3.1, TRANSVERSE, LONGITUDINAL, FEATHERED AND BUTT JOINTS SHALL BE SEALED WITH A 4 INCH WIDE BAND OF PG BINDER ASPHALT CEMENT AS PER 702.01 ACROSS THE TOP SURFACE. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W-8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN, AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

ITEM 442. ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM. TYPE A (448)

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES.

ALL LONGITUDINAL PAVEMENT JOINTS SHALL BE CLOSED BEFORE THE END OF THE WORK DAY. BEFORE THE JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT W8-11-36 (UNEVEN LANES) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS. PLACEMENT OF THESE SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN, AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 442. ASPHALT CONCRETE SURFACE COURSE, 9.5 MM. TYPE A (448) (DRIVEWAYS), AS PER PLAN

THIS ITEM IS TO BE USED TO CREATE A SMOOTH TRANSITION FROM THE COMPLETED SURFACE COURSE OF THE PAVED SHOULDER TO THE EXISTING PAVED DRIVEWAYS. THIS ITEM SHALL BE AS DIRECTED BY THE ENGINEER. ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO CREATE A SMOOTH TRANSITION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448) (DRIVEWAYS), AS PER PLAN.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR N_{des} USE 50 GYRATIONS, FOR N_{max} USE 75 GYRATIONS. MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
USE A PG 64-22 BINDER.
MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
QUALITY CONTROL: DO NOT PERFORM N_{max} IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

THIS ITEM OF WORK SHALL CONFORM TO ITEM 617 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS BOOK WITH EXCEPTION OF 617.02 (MATERIALS).

THE MATERIAL ON THIS PROJECT SHALL BE THE ASPHALT CONCRETE GRINDINGS RESULTING FROM ITEM 254. THE GRINDINGS USED FOR THIS WORK ARE TO BE PLACED AND COMPACTED AS DESCRIBED IN 617.05 WITH SPECIAL CARE TO CREATE PROPER COMPACTION. 100% OF THIS MATERIAL SHALL PASS A 1.5 INCH SIEVE AS JUDGED BY THE ENGINEER. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MEET THE TYPICAL SECTIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER CU. YD. OF ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

PAVEMENT

INTERSECTIONS AND DRIVES

RURAL-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

URBAN-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

EXISTING PAVED DRIVES SHALL BE PLANED AND PAVED SO AS TO PROVIDE A SMOOTH TRANSITION BETWEEN THE HIGHWAY AND THE DRIVE, (DISTANCE FROM EDGE OF ROADWAY MAY VARY AT EACH DRIVE) AS DIRECTED BY THE ENGINEER.

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH AN APRON THE WIDTH OF THE 617 BERM OR 2 FT. MINIMUM. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ITEM 617 AGGREGATE SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN ON THE "SHOULDER DATA" SHEET.

ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS REMINDED OF SECTIONS 105.01, 107.07 & 614.02A OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

PROFILE CORRECTION AT STRUCTURES

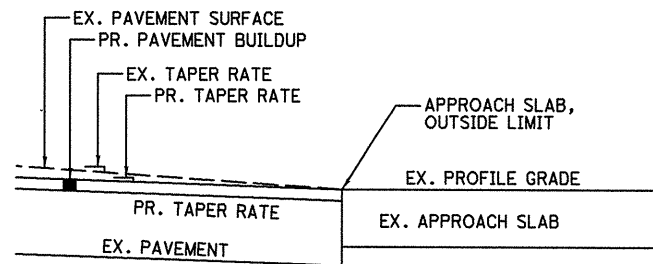
THE CONTRACTOR SHALL CORRECT THE PAVEMENT PROFILE WITH THE RESURFACING OPERATIONS WHILE ENSURING A SMOOTH TRANSITION FROM THE PROPOSED TREATMENT ON THE APPROACH SLABS (OUTSIDE LIMITS) TO THE PROPOSED ROADWAY PAVEMENT BUILDUP.

THE MINIMUM DISTANCE BETWEEN CONSECUTIVE GRADE BREAKS IS:
100' WHERE THE POSTED SPEED IS 50 MPH OR GREATER
50' WHERE THE POSTED SPEED IS LESS THAN 50 MPH

THE FOLLOWING ARE TAPER RATES, BASED ON THE EXISTING PROFILE GRADE OF THE ROADWAY, WHICH SHALL BE MET TO ENSURE A SMOOTH TRANSITION.

SPEED	TAPER RATE
25	55:1
30	80:1
35	110:1
40	140:1
45	190:1
50	230:1
55	250:1
60	340:1
65	340:1
70	400:1

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESURFACING OPERATIONS.



ITEM 254 - PATCHING PLANED SURFACE

AN ESTIMATED QUANTITY OF ITEM 254, PATCHING PLANED SURFACE HAS BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS MANUAL 254.04. PATCHING DEPTH IS 0 TO 2 IN.

**ITEM 407 - TACK COAT
ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE**

AS PER 407.06 THE APPLICATION RATES SHALL BE 0.08 GAL. PER SQ. YD. PRIOR TO THE INTERMEDIATE COURSE AND SHALL BE 0.03 GAL PER SQ. YD. PRIOR TO THE SURFACE COURSE FOR ESTIMATING PURPOSES ONLY. THE RATE OF APPLICATION SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. A COMPLETE PAVEMENT SURFACE COVERAGE SHALL BE REQUIRED. AREAS OF TACK STRIPPED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE RE-COATED PRIOR TO PLACING ASPHALT CONCRETE. ALL COST AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER GALLON FOR ITEM 407, TACK COAT AND ITEM 407 TACK COAT FOR INTERMEDIATE COURSE.

PAVEMENT

PAVEMENT CORING INFORMATION

EB LANE ONLY

CO/ROUTE/SLM	DEPTH & MATERIAL	WHEEL TRACK/SHOULDER (LT, RT, OR SHLD)
HUR-20-17.00	8.00" ASPHALT, 3.00" BRICK	(RT)
HUR-20-17.00	2.50" ASPHALT	(SHLD)
HUR-20-18.00	8.00" ASPHALT, 3.00" BRICK	(LT)
HUR-20-19.00	12.50" ASPHALT, 3.50" BRICK	(RT)
HUR-20-19.00	3.00" ASPHALT	(SHLD)
HUR-20-20.00	11.00" ASPHALT, 3.00" BRICK	(LT)
HUR-20-21.00	9.80" ASPHALT, 10.00" CONCRETE	(RT)
HUR-20-21.00	4.00" ASPHALT	(SHLD)
HUR-20-22.00	11.00" ASPHALT, 3.00" CONCRETE	(LT)
HUR-20-23.00	11.50" ASPHALT, 11.50" CONCRETE	(RT)
HUR-20-23.00	3.30" ASPHALT	(SHLD)
HUR-20-24.00	12.00" ASPHALT, 10.00" CONCRETE	(LT)
HUR-20-25.00	8.30" ASPHALT	(RT)
HUR-20-25.00	4.00" ASPHALT	(SHLD)
HUR-20-26.00	11.30" ASPHALT	(LT)
HUR-20-27.00	10.50" ASPHALT, 4.00" BRICK	(RT)
HUR-20-27.00	4.30" ASPHALT	(SHLD)

LOR-20-0.00	9.80" ASPHALT, 3.5" BRICK	(RT)
LOR-20-0.00	3.50" ASPHALT	(SHLD)
LOR-20-1.00	9.50" ASPHALT, 3.5" BRICK	(LT)
LOR-20-2.00	10.50" ASPHALT, 6.50" CONCRETE	(RT)
LOR-20-3.00	14.30" ASPHALT, 6.80" CONCRETE	(LT)
LOR-20-3.00	13.50" ASPHALT, 7.50" CONCRETE	(RT)
LOR-20-3.00	3.50" ASPHALT	(SHLD)
LOR-20-4.00	15.50" ASPHALT, 7.00" CONCRETE	(LT)
LOR-20-5.00	11.00" ASPHALT, 7.00" CONCRETE	(RT)
LOR-20-5.00	6.30" ASPHALT	(SHLD)

ITEM 254. PAVEMENT PLANING, ASPHALT CONCRETE (CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH ALONG THE CURB CONTINGENT ON THE FOLLOWING: THE PAVEMENT SLOPE SHALL BE CONTINUOUS BETWEEN THE CROWN AND THE CURB WHILE TRYING TO ACHIEVE THE TYPICAL CROSS SLOPE OF 0.016 (SEE TYPICAL SECTIONS FOR FURTHER DETAILS). THE MAXIMUM CROSS SLOPE SHALL BE 0.02 WHILE THE MINIMUM CROSS SLOPE SHALL BE 0.01. THE CROWN OF THE PAVEMENT SHALL BE LOCATED BETWEEN THE TRAVELED LANES, OR AS DIRECTED BY THE ENGINEER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CURB, TO PRODUCE A CROSS SLOPE IN CONFORMANCE WITH THE ABOVE GUIDELINES.

THE ROADWAY HAS BEEN CORED FOR THE EXISTING DEPTH OF THE ASPHALT, AND THE CONTRACTOR SHALL BASE THE MAXIMUM AMOUNT OF ASPHALT MATERIAL THAT MAY BE MILLED OUT OF THE CENTER OF THE ROADWAY IN ORDER TO CORRECT THE TRANSVERSE SLOPE OF THE CROSS SECTION FROM THE "PAVEMENT CORING INFORMATION". FIELD WORK NECESSARY FOR PROPER CONTROL WITHIN PLAN INTENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE INTO ALL CATCH BASINS AND INLETS.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING A MINIMUM 30 FT. SKI-ARM SHALL BE USED DURING PLANING OPERATION.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN SEVEN (7) CALENDAR DAYS. THE 7 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 7 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07. PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OW-171 SIGNS (UNEVEN PAVEMENT). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS.

DESIGN FILE: I:\projects\77284\77284GN001.dgn
WORKSTATION: mrobins DATE: 10/11/2007

CALCULATED
MER
CHECKED
BAD

GENERAL NOTES

HUR-20-16.35
LOR-20-0.00

PAVEMENT

ITEM 254. PAVEMENT PLANING. ASPHALT CONCRETE

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH AT THE CENTER OF PAVEMENT (SEE TYPICAL SECTIONS FOR DEPTHS). THE PAVEMENT SLOPE SHALL BE 0.016, CONTINUOUS BETWEEN THE CROWN AND THE PROPOSED EDGELINE/SHOULDER (SEE TYPICAL SECTIONS FOR FURTHER DETAILS). THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTER OF PAVEMENT IN CONFORMANCE WITH THE ABOVE GUIDELINES. WHEN INCH DEPTH PAVEMENT

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE INTO ALL CATCH BASINS AND INLETS.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING A MINIMUM 30 FT. SKI-ARM SHALL BE USED DURING THE PLANING OPERATION.

ABOVE CONDITIONS DO NOT APPLY TO PLANING PERFORMED IN AREAS AS DIRECTED BY THE ENGINEER TO ELIMINATE ADVERSE SURFACE DISTORTION, OR TO PROVIDE A SATISFACTORY GRADE AT CASTINGS. THESE AREAS INCLUDE MATERIAL DISPLACED BY RUTTING OR SHOVING ASPHALT. SURFACE PATCHES, CONCRETE PATCHING, TRANSVERSE BUMPS, PAVEMENT AT RAILROADS, CASTINGS, ETC. PLANING OF THESE AREAS SHALL BE PERFORMED THROUGHOUT THE PROJECT PRIOR TO PAVING. AREAS TO BE PLANED WILL BE DESIGNATED BY THE ENGINEER.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN FOURTEEN (14) CALENDAR DAYS. THE 14 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07. PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERRECT W8-9A SIGNS (UNEVEN LANES). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS.

DRAINAGE SLOTS SHALL BE CUT INTO THE SHOULDER(S) AT THE LOW POINT OF EACH PLANED SECTION TO PREVENT TRAPPED WATER PUDDLES, AND REFILLED DURING RESURFACING. CUTTING AND FILLING DRAINAGE SLOTS SHALL BE INCLUDED IN PAYMENT WITH ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE.

THE AMOUNT OF GRINDINGS RESULTING FROM THIS WORK MAY PRODUCE UNEXPECTED VOLUMES OF GRINDINGS DUE TO THE EXISTING TRANSVERSE SLOPE OF THE PAVEMENT.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF PAVEMENT PLANING, ASPHALT CONCRETE. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR UNEXPECTED VOLUMES OF ASPHALT GRINDINGS.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

ON THIS PROJECT ITEM 301 COARSE AGGREGATE WILL HAVE A TWO FACE CRUSH COUNT OF 75% PER ASTM D 5821. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT WILL BE 20%. ENSURE THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE USED IN THE ITEM 301 IS SAND MANUFACTURED FROM STONE OR AIR COOLED SLAG.

ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN SHALL BE COATED WITH A PG GRADE LIQUID ASPHALT (SIDES AND BOTTOM) AT AN APPLICATION RATE OF 0.25 GAL. PER SQ. YD.

ALL COSTS TO BE INCLUDED IN ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN.

PAVEMENT

ITEM 254. PAVEMENT PLANING. ASPHALT CONCRETE (PAVED SHOULDER) 3" DEEP

THE INTENT OF THE PLANING IS TO MILL 3.00 INCHES (AFTER THE 1.00" PLANING OF THE 24' WIDTH OF THE ROADWAY), MAXIMUM DEPTH, FOR THE ENTIRE WIDTH OF THE PAVED SHOULDER. (SEE TYPICAL SECTIONS FOR FURTHER DETAILS). THE MILLING DEPTH SHALL BE CONTROLLED FROM THE ADJACENT PLANED PAVEMENT (THROUGH LANES) IN CONFORMANCE WITH ABOVE GUIDELINES. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE OFF THE PAVEMENT SURFACE AND INTO ALL CATCH BASINS, INLETS AND DITCHES.

PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK.

HURON (FED/STATE = 99.4% FED/CITY = 0.6%)

AREAS OF REPLACEMENT SHALL BE AT THE DISCRETION OF THE PROJECT ENGINEER. ESTIMATED WORK BETWEEN SLM 16.35 AND SLM 28.69, EXCLUDING THE VILLAGE OF WAKEMAN.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (43,544') * (4')/ 9 = 19,353 SQ. YD. FED/STATE = 19237 SQ. YD. FED/CITY = 116 SQ. YD.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (43,544) * (4') * (3/12)/27 = 1613 C.Y. FED/STATE = 1603 C.Y. FED/CITY = 10 C.Y.

ITEM 407 - TACK COAT (19,353)* (0.08) = 1548 GALLON FED/STATE = 1539 GALLON FED/CITY = 9 GALLON

LORAIN

AREAS OF REPLACEMENT SHALL BE AT THE DISCRETION OF THE PROJECT ENGINEER. ESTIMATED WORK BETWEEN SLM 0.00 AND SLM 6.02.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (9,947) * (4')/ 9 = 4,421 SQ. YD.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (9,947) * (4') * (3/12)/27 = 368 C.Y.

ITEM 407 - TACK COAT (4,421)* (0.08) = 354 GALLON

ALL QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

ITEM 614. LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP-MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

WAKEMAN CURVE IMPROVEMENTS: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT, WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED AND/OR WHERE TRAFFIC IS HINDERING NORMAL SIGNAL OPERATIONS.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION. LAW ENFORCEMENT OFFICERS (LEOS) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEOS ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH: THE VILLAGE OF WAKEMAN POLICE DEPARTMENT 440-839-2511.

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 80 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF CONTRACTORS WISH TO UTILIZE LEOS FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614, MAINTAINING TRAFFIC.

ITEM 442. ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448)

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES.

BEFORE THE LONGITUDINAL JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERRECT W8-11-36 (UNEVEN LANES) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS. PLACEMENT OF THESE SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC.

MAINTENANCE OF TRAFFIC

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE OF SUFFICIENT LENGTH, AS DIRECTED BY THE ENGINEER.

CONSTRUCTION "BUMP" (W8-1-36) AND "ADVISORY SPEED" (W13-1-24) SIGNS SHALL BE ERRECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

ITEM 614. ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO CONSTRUCT A TEMPORARY ASPHALT WEDGE FROM THE EXISTING PAVEMENT TO THE PLANED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 1.5 INCHES, AS DIRECTED BY THE ENGINEER. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS, AS DIRECTED BY THE ENGINEER. BEFORE THE ASPHALT CONCRETE RESURFACING IS PLACED, THE TEMPORARY WEDGE SHALL BE REMOVED AND THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 100 CU YD

ITEM 614. WORK ZONE MARKING SIGN

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE MARKING SIGNS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, 614.04.

WORK ZONE MARKING SIGN: (W8-H13-36) NO EDGE LINE	= 43 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 25 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 25 EACH
TOTAL	= 93 EACH

DESIGN FILE: I:\projects\77284\77284GN001.dgn
WORKSTATION: sdeer DATE: 10/22/2007

CALCULATED
MER
CHECKED
BAD

GENERAL NOTES

HUR-20-16.35
LOR-20-0.00

6
107

MAINTENANCE OF TRAFFIC

ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (FLEXIBLE)

CONSTRUCT PAVEMENT AND EARTHWORK AS SHOWN IN THE CROSS SECTIONS WHICH SHALL BE LEFT IN PLACE. AREAS AND VOLUMES OF EARTHWORK SHOWN ON THE CROSS SECTION SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP-MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

WAKEMAN CURVE IMPROVEMENTS: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT, WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED AND/OR WHERE TRAFFIC IS HINDERING NORMAL SIGNAL OPERATIONS.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEOS) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEOS ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH THE VILLAGE OF WAKEMAN POLICE DEPARTMENT 440-839-2511.

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 80 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF CONTRACTORS WISH TO UTILIZE LEOS FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614, MAINTAINING TRAFFIC.

PROJECT LIMITATIONS

THE FOLLOWING LIMITATIONS APPLY TO THIS PROJECT:

1. US 20 IS USED BY 4 SCHOOL DISTRICTS FOR TRANSPORTATION AND PICKUP (FIRELANDS, OBERLIN, NORWALK AND WESTERN RESERVE). THE SCHOOLS REQUEST THAT WE DO NOT START WORK UNTIL AFTER SCHOOL IS OUT WHICH IS TENTATIVELY SET AT JUNE 6, 2008. THEY REQUEST THAT IF WE HAVE TO DISTURB THE TRANSPORTATION THAT IT BE ONLY ONE TIME AND THAT BEING AT THE BEGINNING OF THE SCHOOL YEAR IN AUGUST. THE SCHOOLS HAVE YET TO SET THE DATES. THE FINAL DATES ARE AFFECTED BY THE WEATHER DAYS THEY TAKE OFF.
2. WESTERN RESERVE SCHOOLS HAVE SUMMER SCHOOL WHICH RUNS FROM AUGUST 4 THRU AUGUST 15, 2008 (TENTATIVE DATES). IF RESURFACING WORK EXTENDS PAST AUGUST 3, 2008, RESTRICT PAVING OPERATIONS TO THE HOURS BETWEEN 9:00 AM TO 2:00 PM IN ORDER TO AVOID THE MASS DROPOFF/PICKUP ISSUES.
3. THE LEFT TURN LANE CONSTRUCTION WORK IN FRONT OF THE WESTERN RESERVE SCHOOL CAMPUS MAY ONLY BE PERMITTED BETWEEN JUNE 15, 2008 AND JULY 31, 2008. AT A MINIMUM THE TURN LANE SURFACE IS TO MATCH THE EXISTING ADJOINING SURFACE OF US 20 AND HAVE ALL OF THE GRADING WORK COMPLETED.
4. THE DRIVEWAY AT STATION 1131+00 RIGHT SHALL BE MAINTAINED AT ALL TIMES. (ACCESS TO THE ADMINISTRATION BUILDING)
5. THE CONTRACTOR MAY ONLY CLOSE ONE DRIVEWAY AT A TIME FOR THE DRIVEWAYS LOCATED AT STATIONS 1138+45 RT AND 1141+46 RT.
6. TENTATIVELY MOST OF THE SCHOOLS START AUGUST 18, 2008. IF WORK IS EXTENDED PAST THE ORIGINAL PROJECT COMPLETION DATE BY CHANGE ORDER, RESTRICT PAVING OPERATIONS TO THE HOURS BETWEEN 9:00 AM TO 2:00 PM

ENVIRONMENTAL COMMITMENTS

1. THE MONITORING WELLS LOCATED ADJACENT TO THE WAKEMAN MICKEY MART PROPERTY AT 52 WEST MAIN STREET ARE TO REMAIN IN PLACE AND NOT BE DISTURBED WITH THE PROJECT.
2. REVIEW OF THE OHIO STATE FIRE MARSHAL'S OFFICE, BUREAU OF UNDERGROUND STORAGE TANKS (BUSTR) REVEALED THAT PETROLEUM CONTAMINATED SOILS WERE FOUND AT THE WAKEMAN MICKEY MART PROPERTY. SINCE NO EXCAVATION OF GREATER THAN 3 FEET IS PROPOSED AT THIS PROPERTY, NO SPECIAL TESTING OR HANDLING OF THESE SOILS ARE REQUIRED.
3. THE ENTIRE COUNTY OF HURON IS LOCATED WITHIN THE KNOWN RANGE OF THE FEDERALLY ENDANGERED SPECIES, THE INDIANA BAT. ALTHOUGH NO TREES ARE SPECIFICALLY MARKED FOR REMOVAL, ANY UNAVOIDABLE CUTTING OF TREES WITH SUITABLE ROOSTING AND BROOD-REARING HABITAT FOR THE INDIANA BAT (LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES) WILL BE PERFORMED ONLY BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT.
4. NATIVE VEGETATION IN COMBINATION WITH ROCK CHANNEL PROTECTION WILL BE USED FOR EROSION CONTROL.
5. WRITTEN PERMISSION MUST BE OBTAINED FROM ANY NECESSARY IN-STREAM BLASTING FROM THE CHIEF OF ODNR'S DIVISION OF WILDLIFE IN ACCORDANCE WITH OHIO REVISED CODE (ORC) SECTION 1533.58.

6. AN ARMY CORPS OF ENGINEER'S NATIONWIDE PERMIT #3 HAS BEEN OBTAINED. THE CONTRACTOR SHALL FOLLOW ALL PERTINENT CONDITIONS DURING CONSTRUCTION ACTIVITIES.

DESIGN FILE: I:\projects\77284\77284GN001.dgn
WORKSTATION: sdeer DATE: 11/15/2007

CALCULATED
MER
CHECKED
BAD

GENERAL NOTES

HUR-20-16.35
LOR-20-0.00

7
107

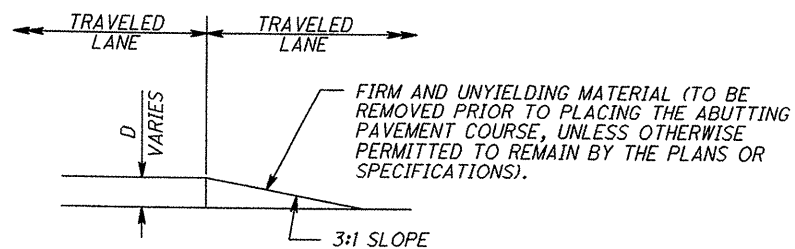
REVISED: 11-15-07

GENERAL NOTES

- IT IS INTENDED THAT THIS DRAWING BE USED FOR TREATMENT OF DROP-OFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS, AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE CONSTRUCTION PLANS. THE SUGGESTED TREATMENTS ARE INTENDED FOR HIGH VOLUME PROJECTS THAT WILL LAST AT LEAST SEVEN DAYS AND HAVE AN ACTIVE WORK ZONE 1 MILE (1.6 KM) OR LESS IN LENGTH. FOR GUIDANCE ON THE USE OF THIS SHEET, SEE THE TRAFFIC ENGINEERING MANUAL, WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED HEREON, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.
- WHILE THE NEED FOR CERTAIN ADVISORY SIGNING IS NOTED HEREON, IT IS NOT INTENDED THAT THIS BE INDICATIVE OF ALL SIGNING THAT MAY BE REQUIRED TO ADVISE OR WARN MOTORISTS. ALL REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) MUST BE FULFILLED.
- IN URBAN OR OTHERWISE HEAVILY DEVELOPED AREAS WHERE PEDESTRIANS AND/OR BICYCLISTS MAY BE PRESENT IN SIGNIFICANT NUMBERS, ADDITIONAL SIGNING AND PROTECTIVE MEASURES OTHER THAN THOSE SHOWN HEREON MAY BE REQUIRED.
- THE DROP-OFF TREATMENT SELECTED FOR USE AT ANY GIVEN LOCATION SHALL BE AS APPROPRIATE FOR THE PREVAILING CONDITIONS AT THE SITE.
- WHERE CONCRETE BARRIER IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH SCD RM-4.2 AND ITEM 622.
- WHEN DRUMS ARE SPECIFIED FOR A DROP-OFF CONDITION, A MINIMUM NUMBER OF FOUR DRUMS SHALL BE USED. SPACING SHALL BE AS INDICATED IN THE PLANS OR AS SPECIFIED IN THE OMUTCD.
- WHEN W8-9 (LOW SHOULDER) SIGNS OR W8-9A (SHOULDER DROP-OFF) SIGNS OR W8-1871 (UNEVEN LANES) SIGNS ARE REQUIRED, THEY SHALL BE PLACED 750' (250 M) IN ADVANCE OF THE CONDITION, ON ALL INTERSECTING ENTRANCE RAMPS WITHIN THE LIMITS OF THE CONDITION AND IMMEDIATELY BEYOND ALL INTERSECTING ROADWAYS WITHIN THE LIMITS OF THE CONDITION. WHEN THE DROP-OFF CONDITION EXTENDS MORE THAN 0.5 MILE (800M), ADDITIONAL SIGNS SHOULD BE ERECTED AT INTERVALS OF 1.0 MILE (1600 M) OR LESS.
- FOR LOCATIONS, SUCH AS AT RAMPS, LANE SHIFTS, LANE CLOSURES, ETC., WHERE TRAFFIC IS REQUIRED TO NEGOTIATE A DIFFERENCE IN ELEVATION BETWEEN PAVEMENTS, A 3:1 SLOPE TREATMENT SIMILAR TO THE OPTIONAL WEDGE TREATMENT SHALL BE PROVIDED.
- PORTABLE CONCRETE BARRIER SHALL BE PLACED ON THE SAME LEVEL AS THE TRAFFIC SURFACE AND SHALL NOT ENCR OACH ON LANE WIDTH(S) DESIGNATED AS THE MINIMUM REQUIRED FOR TRAFFIC USE. WHERE DRUMS ARE USED, AND THEIR PRESENCE WOULD REDUCE TRAVELED LANE WIDTHS TO LESS THAN 10' (3.0M), DRUMS MAY BE PLACED ON THE OPPOSITE LEVEL FROM THAT OF TRAFFIC PROVIDED THE DROP-OFF DEPTH DOES NOT EXCEED 5" (125) AND APPROVAL IS GRANTED BY THE PROJECT ENGINEER.
- PAVEMENT REPAIRS (OR SIMILAR WORK):
 - LENGTHS GREATER THAN 60' (18 M) - UTILIZE APPROPRIATE TREATMENT FROM CONDITION I.
 - LENGTHS OF 60' (18 M) OR LESS - REPAIRS SHALL BE EFFECTED IN ACCORDANCE WITH CMS 255.08. DRUMS MAY BE USED AS A SEPARATOR ADJACENT TO THE TRAVELED LANE.

OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)

- THIS TREATMENT MAY BE USED WHEN PERMITTED FOR CONDITION I ONLY.
- W8-9A SIGN REQUIRED



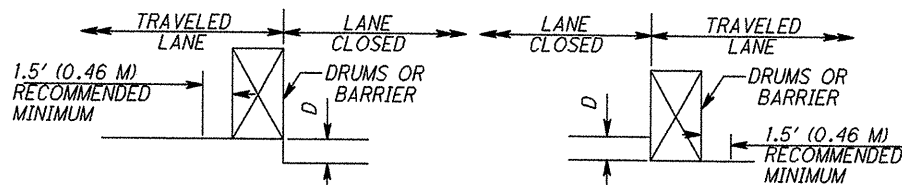
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

- THESE TREATMENTS ARE TO BE USED FOR RESURFACING, PAVEMENT PLANING, EXCAVATION, ETC. BETWEEN OR WITHIN TRAVELED LANES.

D	TREATMENT
$\leq 1/2"$ (≤ 40)	ERECT W8-11 SIGN
$> 1/2"$ -3" (40-75)	1. LANE CLOSURE UTILIZING DRUMS* AS SHOWN BELOW OR 2. OPTIONAL WEDGE TREATMENT
$> 3"$ -5" (> 75 -125)	LANE CLOSURE UTILIZING DRUMS AS SHOWN BELOW
$> 5"$ (> 125)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW

* CONES MAY BE USED FOR DAYTIME ONLY CONDITIONS



CONDITION II

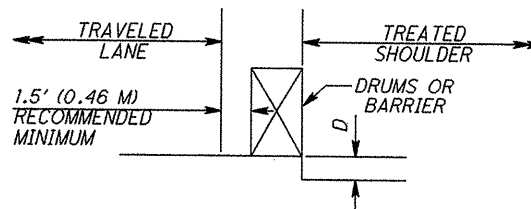
DROP-OFFS WITHIN GRADED SHOULDER AREA

THE TREATMENTS INDICATED BELOW ARE FOR USE IN CONJUNCTION WITH RESURFACING, PLANING, OR EXCAVATIONS WITHIN THE GRADED SHOULDER AREA.

THE GRADED SHOULDER AREA IS THAT FLAT OR GRADUALLY SLOPING AREA BETWEEN THE EDGE OF A NORMALLY TRAVELED LANE AND THE MORE STEEPLY SLOPING DITCH FORESLOPE OR EMBANKMENT SLOPE. ITS SURFACE MAY BE SOIL OR TURF, AND/OR IT MAY BE INCLUSIVE OF A "TREATED" AREA (IMPROVED WITH MAXIMUM WIDTH SHALL BE CONSIDERED TO BE 12' (3.6 M)).

D	TREATMENT
$< 1/2"$ (< 40)	ERECT W8-9A SIGNS
$> 1/2"$ -5" (> 40 -125)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS OR 3. OPTIONAL SHOULDER TREATMENT
$> 5"$ -12" (> 125 -305) DAYLIGHT ONLY	IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW.
$> 5"$ -24" (> 125 -610)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW. OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS.
$> 5"$ -24" (> 125 -610)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW

*MINIMUM LANE WIDTHS SHALL BE 10' (3.0 M) UNLESS OTHERWISE SPECIFIED IN THE PLANS.



OPTIONAL SHOULDER TREATMENT

- THIS TREATMENT MAY NOT BE USED WITHIN A BITUMINOUS SHOULDER WHERE A HOT LONGITUDINAL JOINT PER CMS 401.15 IS REQUIRED.
- W8-9 SIGNS REQUIRED.



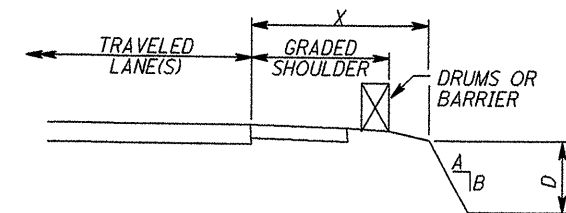
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

- SEE NOTE 2 UNDER CONDITION II.
- USE CHART A OR B BELOW, AS APPLICABLE.

CHART A

USE FOR: 1. UNCURBED FACILITIES.
2. CURBED FACILITIES, WHERE:
A. CURBS ARE LESS THAN 6" (150) IN HEIGHT.
B. CURBS ARE 6" (150) OR GREATER IN HEIGHT AND THE LEGAL SPEED IS GREATER THAN 40 MPH (70 KM/H)

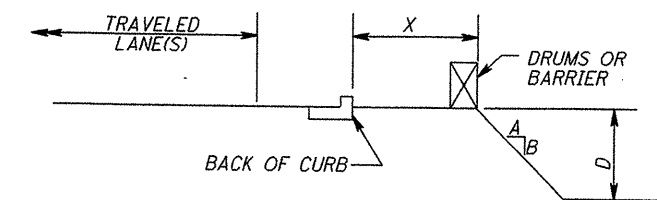


X	D	A/B	Treatment Required	
			Day	Night
0-4' (0-1.2 M)	ANY	ANY	(A)	(A)
4'-30' (1.2 M-9.1 M)	ANY	3:1 OR FLATTER	NONE	NONE
4'-12' (1.2 M-3.6 M)	$\leq 3"$ (≤ 75)	STEEPER THAN 3:1	NONE	NONE
4'-12' (1.2 M-3.6 M)	$> 3"$ - $\leq 12"$ (> 75 - ≤ 305)	STEEPER THAN 3:1	DRUMS	DRUMS
4'-12' (1.2 M-3.6 M)	$> 12"$ (> 305)	STEEPER THAN 3:1	DRUMS	BARRIER
$> 12'$ -20' (> 3.6 M-6.1 M)	$> 12"$ (> 305)	STEEPER THAN 3:1	NONE	NONE
$> 12'$ -20' (> 3.6 M-6.1 M)	$> 12"$ - $\leq 24"$ (> 305 - ≤ 610)	STEEPER THAN 3:1	DRUMS	DRUMS
$> 12'$ -20' (> 3.6 M-6.1 M)	$> 24"$ (> 610)	STEEPER THAN 3:1	DRUMS	BARRIER
$> 20'$ -30' (> 6.1 M-9.1 M)	$\leq 24"$ (≤ 610)	STEEPER THAN 3:1	NONE	NONE
$> 20'$ -30' (> 6.1 M-9.1 M)	$> 24"$ (> 610)	STEEPER THAN 3:1	DRUMS	BARRIER
$> 30'$ (> 9.1 M)	ANY	ANY	NONE	NONE

(A) USE TREATMENT SPECIFIED UNDER CONDITION II

CHART B

USE FOR: CURBED FACILITIES, WHERE THE CURB IS 6" (150) OR GREATER IN HEIGHT AND THE LEGAL SPEED IS 40 MPH (70 KM/H) OR LESS.



X	D	A/B	TREATMENT REQUIRED	
			DAY	NIGHT
0-10' (0-3.0 M)	$\leq 12"$ (≤ 305)	ANY	NONE	DRUMS
0-10' (0-3.0 M)	$> 12"$ (> 305)	ANY	DRUMS	DRUMS
$> 10'$ (> 3.0 M)	ANY	ANY	NONE	NONE

NOTE: ALL METRIC DIMENSIONS (IN BRACKETS ()) ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

ITEM SPECIAL, MAILBOX SUPPORT SYSTEM

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF EXISTING NON-STANDARD MAILBOX SUPPORTS AND FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED HARDWARE IN ACCORDANCE WITH THE DETAILS SHOWN, AND ATTACHING AN OWNER SUPPLIED MAILBOX, AT LOCATIONS DETERMINED BY THE ENGINEER.

IN ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE BOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SINGLE POST. [HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.]

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4 1/2 IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. I.D., AND CONFORM TO AASHTO M 181.

POSTS SHALL BE SET AS PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH THE LOCAL POST MASTER AND NOTIFYING THE PROPERTY OWNERS PRIOR TO WORK.

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE THE GROUPING.

WHERE GUARDRAIL EXISTS, MAILBOXES AND THEIR SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL. SUPPORTS MUST STILL MEET THE BREAKAWAY REQUIREMENTS LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE.

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE HURON	21 EACH
LORAIN	12 EACH
ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE HURON	7 EACH

MAILBOX APPROACHES

THE MAILBOX APPROACHES SHALL BE PAVED WITH 1.00" ITEM 442 INTERMEDIATE COURSE AND 1.25" ITEM 442 SURFACE COURSE. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP-4.1 OR AS DIRECTED BY THE ENGINEER.

GRADING SHALL BE PERFORMED IN THESE AREAS TO OBTAIN A BASE WHICH WILL ALLOW THE FINISHED GRADE TO BE FLUSH WITH ADJACENT PAVEMENT. A QUANTITY OF ITEM 617 COMPACTED AGGREGATE, AS PER PLAN HAS BEEN PROVIDED FOR AREAS WHERE THE SHOULDER IS LOW PRIOR TO GRADING AND/OR LOW AREAS CAUSED BY THE REMOVAL OF UNSUITABLE MATERIAL. QUANTITIES TO PERFORM THIS WORK HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE ESTIMATED AS FOLLOWS.

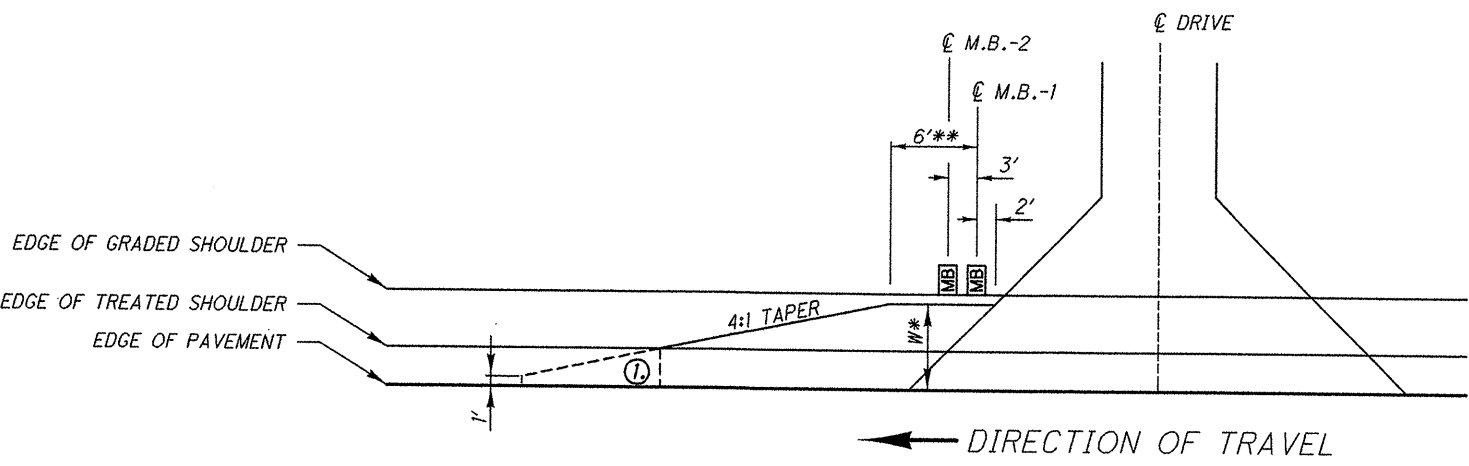
ITEM 209 - GRADING MAILBOX APPROACHES:	
HURON	28 EACH
LORAIN	12 EACH
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN	
HURON	56 CU YD
LORAIN	24 CU YD

LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED

ADDRESSES AND/OR LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED:

HURON		LORAIN	
735 - DOUBLE	2671	52953	
735 - DOUBLE	2697	52356	
860	3083	51670	
1155	3185	50376	
1161	3881	50290	
1163	3639	49840	
1180	3762	49501	
1232	4275	49300	
1246	4707	48454	
1400 - DOUBLE	4783	47285	
1406 - DOUBLE	4961	47104	
1506 - DOUBLE	5600	46805	
1507 - DOUBLE	6431 - DOUBLE		
2119	6617		

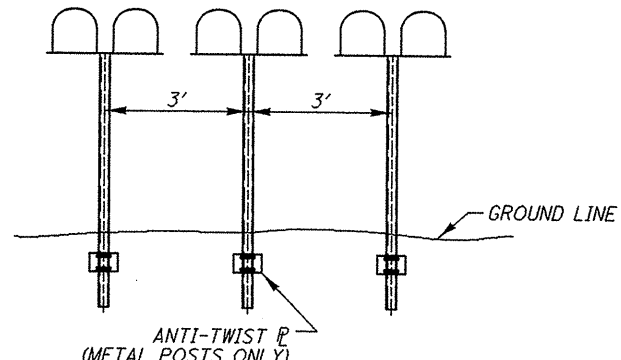
FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



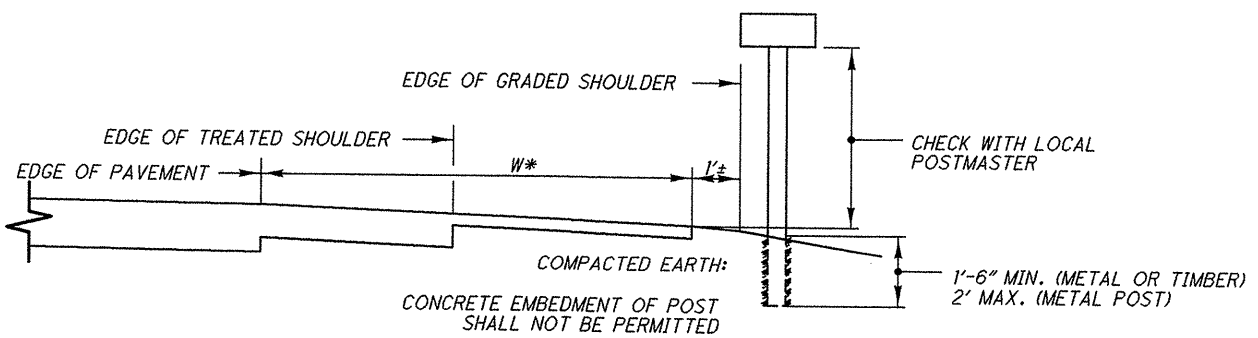
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

- W* NOTES
- 1) WHERE EXISTING STANDARD MAILBOX POSTS ARE BEHIND GUARDRAIL AND ARE TO REMAIN IN PLACE, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL.
 - 2) WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND TO FACE OF EXISTING STANDARD MAILBOX WITH MAILBOX REMAINING IN PLACE.
 - 3) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL AND MAILBOX SHALL BE INSTALLED BEHIND THE GUARDRAIL.
 - 4) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT. MINIMUM, EXCEPT WHERE FIELD CONDITIONS WILL NOT PERMIT.

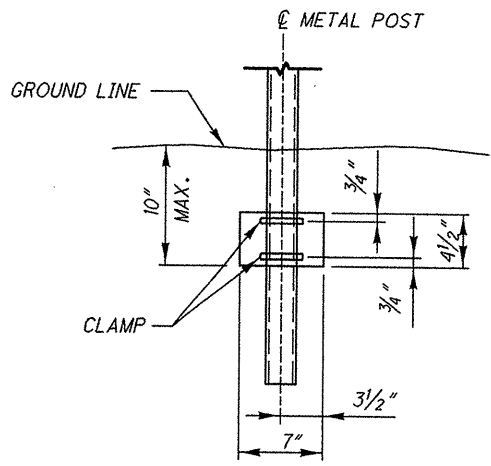
** NOTE
1) 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX.



GROUP MAILBOX INSTALLATION



CROSS SECTION / ELEVATION VIEW



DESIGN FILE: I:\projects\77284\77284GM002.dgn
WORKSTATION: mrobins1 DATE: 10/1/2007

SHEET NUMBER													FED/	FED/	ITEM	ITEM	TOTAL	UNIT	DESCRIPTION	REF.	
9	13	14	19	27	31	32	33A	48	72	81	83	99	CITY	STATE	EXT.			SHEET			
										LUMP				LUMP	201	11000	LUMP	ROADWAY			
				941										941	202	30001	941	SQ FT	CLEARING AND GRUBBING		
				90.5										90.5	202	32000	90.5	FT	WALK REMOVED, AS PER PLAN		
				38										38	202	32500	38	FT	CURB REMOVED		
			621.88											621.88	202	38000	621.88	FT	CURB AND GUTTER REMOVED		
			1193.75											1193.75	202	38200	1193.75	FT	GUARDRAIL REMOVED		
			4											4	202	38700	4	EACH	GUARDRAIL POST REMOVED		
			1											1	202	42206	1	EACH	ANCHOR ASSEMBLY REMOVED		
			2											2	202	42610	2	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE B-98		
			14											14	202	42620	14	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98		
			3											3	202	42806	3	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE		
			4											4	202	47200	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE		
					1,143									1143	202	54000	1143	EACH	RAISED PAVEMENT MARKER REMOVED		
			65					4333	437					4770	203	10000	4770	CU YD	EXCAVATION		
														65	203	10001	65	CU YD	EXCAVATION, AS PER PLAN		
								337	35					695	203	20000	695	CU YD	EMBANKMENT		
			270											270	203	20001	270	CU YD	EMBANKMENT, AS PER PLAN		
														3082	204	10000	3082	SQ YD	SUBGRADE COMPACTION		
														4	204	45000	4	hour	PROOF ROLLING		
			36.14											36.14	209	15001	36.14	STATION	RESHAPING UNDER GUARDRAIL, AS PER PLAN		
	23.95	12.04												0.28	35.71	209	60500	35.99	MILE	LINEAR GRADING	
40														40	209	80000	40	EACH	GRADING MAILBOX APPROACHES		
												4		4	604	38500	4	EACH	MONUMENT ASSEMBLY		
	2													2	604	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE		
			1100											1100	606	13000	1100	FT	GUARDRAIL, TYPE 5		
			1193.75											1193.75	606	16500	1193.75	FT	GUARDRAIL REBUILT, TYPE 5		
			37.50											37.50	606	17290	37.5	FT	GUARDRAIL, TYPE 5, LONG-SPAN		
			4											4	606	17900	4	EACH	GUARDRAIL POST		
			1											1	606	22010	1	EACH	ANCHOR ASSEMBLY, TYPE E-98		
			1											1	606	25000	1	EACH	ANCHOR ASSEMBLY, TYPE A		
			2											2	606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T		
			3											3	606	27900	3	EACH	ANCHOR ASSEMBLY REBUILT, TYPE T		
			2											2	606	28000	2	EACH	ANCHOR ASSEMBLY REBUILT, TYPE B-98		
			14											14	606	28050	14	EACH	ANCHOR ASSEMBLY REBUILT, TYPE E-98		
			3											3	606	35000	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1		
			16											16	606	35140	16	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4		
			1											1	606	35141	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN		
			4											4	606	35150	4	EACH	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4		
			25											25	606	98000	25	FT	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5		
			426											426	608	52010	426	SQ FT	CURB RAMP, TYPE A1		
			515											515	608	52020	515	SQ FT	CURB RAMP, TYPE A2		
			38											38	609	12000	38	FT	COMBINATION CURB AND GUTTER, TYPE 2		
			90.5											90.5	609	26000	90.5	FT	CURB, TYPE 6		
33														33	SPECIAL	69050100	33	EACH	MAILBOX SUPPORT SYSTEM, SINGLE		
7														7	SPECIAL	69050200	7	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE		
EROSION CONTROL																					
								2	2	2				6	659	00100	6	EACH	SOIL ANALYSIS TEST		
								960	105	147				1212	659	00300	1212	CU YD	TOPSOIL		
								8645	937	1327				10909	659	10000	10909	SQ YD	SEEDING AND MULCHING		
								1.95	0.02	0.18				2.15	659	20000	2.15	TON	COMMERCIAL FERTILIZER		
								432	47	66				545	659	14000	545	SQ YD	REPAIR SEEDING AND MULCHING		
								1.79	0.19	0.27				2.25	659	31000	2.25	ACRE	LIME		
								47	5	7				59	659	35000	59	M GAL	WATER		
								LUMP						LUMP	832	15000	LUMP		STORM WATER POLLUTION PREVENTION PLAN		
								5000						5000	832	30000	5000	EACH	EROSION CONTROL		

GENERAL SUMMARY

HUR-20-16.35
LOR-20-0.00

REVISED: 10-22-07

SHEET NUMBER									100% CITY	FED/ CITY	FED/ STATE	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET	
4	6	9	13	14	17	19	31	32										
																DRAINAGE		
								66.5			66.5	603	04400	66.5	FT	12" CONDUIT, TYPE B		
								50.8			50.8	603	10400	50.8	FT	24" CONDUIT, TYPE B		
								17.9			17.9	603	11900	17.9	FT	27" CONDUIT, TYPE B		
								1			1	604	04900	1	EACH	CATCH BASIN, NO. 2-3		
						5					5	604	09000	5	EACH	CATCH BASIN ADJUSTED TO GRADE		
								1			1	604	09500	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE		
						10					10	604	20600	10	EACH	INLET ADJUSTED TO GRADE		
								1			1	604	30100	1	EACH	MANHOLE, NO. 1		
						9					9	604	34500	9	EACH	MANHOLE ADJUSTED TO GRADE		
																PAVEMENT		
								4,666			4666	252	01500	4666	FT	FULL DEPTH PAVEMENT SAWING		
6,678									24		6654	253	02000	6678	CU YD	PAVEMENT REPAIR		
			158,611	84,762				1,957	1971	243359	254	01000	245330	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, (1" DEEP)			
	23,774		37,853						116	61511	254	01000	61627	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, (3" DEEP)			
								1971		1971	254	01000	1971	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE			
			1,956	844					20	2780	254	01600	2800	SQ YD	PATCHING PLANED SURFACE			
								866		866	301	46001	866	CU YD	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN			
								510		510	304	20000	510	CU YD	AGGREGATE BASE			
1,902			16,015	6,779				117	157	24656	407	10000	24813	GALLON	TACK COAT			
			6,698	3,358					37	10019	407	14000	10056	GALLON	TACK COAT FOR INTERMEDIATE COURSE			
			11,240	5,648					131	16757	408	10000	16888	GALLON	PRIME COAT			
			9,614	4,662					107	14169	442	10000	14276	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)			
			42					3		45	442	10511	45	CU YD	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (448) (DRIVEWAYS), AS PER PLAN	5		
			4,510	2,358					55	6813	442	20100	6868	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448)			
1,981			1,136					3	10	3110	442	20200	3120	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)			
								6		6	442	20214	6	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448) (DRIVEWAYS)			
								24		24	617	10100	24	CU YD	COMPACTED AGGREGATE			
		80	1,182	590					14	1838	617	10101	1852	CU YD	COMPACTED AGGREGATE, AS PER PLAN			
			28,103	14,124					328	41899	617	20000	42227	SQ YD	SHOULDER PREPARATION			
								764		764	SPECIAL	69012050	764	SQ YD	REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS			
																WATER WORK		
						6				6	638	10800	6	EACH	VALVE BOX ADJUSTED TO GRADE			
																TRAFFIC CONTROL		
								1,197		1197	621	00100	1197	EACH	RPM			
								61		61	626	00100	61	EACH	BARRIER REFLECTOR, TYPE A			
								8		8	626	00200	8	EACH	BARRIER REFLECTOR, TYPE B			
						52.5				52.5	630	02100	52.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST			
						6		3		9	630	85100	9	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION			
						2				2	630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL			
								3		3	630	86010	3	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION			
								36.72		0.14	36.58	642	00100	36.72	MILE	EDGE LINE, TYPE 1		
								18.55		0.07	18.48	642	00300	18.55	MILE	CENTER LINE, TYPE 1		
								185			185	642	00390	185	FT	CHANNELIZING LINE		
								313			313	642	00690	313	FT	TRANSVERSE/DIAGONAL LINE		
								2			2	642	01108	2	EACH	SCHOOL SYMBOL MARKING, 96"		
								1,111			1111	642	01190	1111	FT	PARKING LOT STALL MARKING		
								1522		24	1498	644	00500	1522	FT	STOP LINE		
								698			698	644	00600	698	FT	CROSSWALK LINE		

GENERAL SUMMARY

HUR-20-16.35
LOR-20-0.00

* - FOR TYPICALS, SEE SHEETS 15-16, 33 & 53-55

REVISED: 10-22-07

PARTICIPATION	ROUTE	LOG POINT TO LOG POINT		LENGTH		WIDTH FEET AVG.	* T Y P I C A L	PAVEMENT AREA SQ YD	254			407	407	442		442		442		442		604	AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA		209	408	617		617					
				MILE	FEET				PAVEMENT PLANING, ASPHALT CONCRETE (1.00")	PAVEMENT PLANING, ASPHALT CONCRETE (3.00")	PATCHING PLANNED SURFACE	TACK COAT @ 0.08 GAL/SY	TACK COAT FOR INTERM. COURSE @ 0.03 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448)	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448) (DRIVEWAYS), AS PER PLAN	MONUMENT BOX ADJUSTED TO GRADE		SQ YD	MILE	GALLON	COMPACTED AGGREGATE, AS PER PLAN		SHOULDER PREPARATION											
																		SL	SR				1.5 INCHES													
		STRAIGHT LINE MILEAGE	STRAIGHT LINE MILEAGE	SQ.YD	SQ.YD	SQ.YD	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	INCH	CU.YD.	INCH	CU.YD.	FT	FT	SQ YD	MILE	GALLON	CU YD	SQ.YD													
FED/ST	US 20	16.35	16.39	0.04	211.2	31.25	1	733	563		6	45	22	1.50	31	1	16					2.0	2.0	94	0.08	38	4	94								
FED/ST	US 20	16.39	16.49	0.10	528	30.25	1	1,775	1,408		14	113	53	1.50	74	1	39					2.0	2.0	235	0.20	94	10	235								
CITY	US 20 RT	16.49	16.54	0.05	264	15	1	440	704		7	56	13	1.50	18	1	20					2.0	2.0	117	0.10	47	5	117								
FED/ST	US 20 LT	16.49	16.54	0.05	264	15	1	440	704		7	56	13	1.50	18	1	20					2.0	2.0	117	0.10	47	5	117								
FED/ST	US 20	16.54	16.75	0.21	1108.8	30	1	3,696	2,957		30	237	111	1.50	154	1	82					2.0	2.0	493	0.42	197	21	493								
FED/ST	US 20 LT	16.75	16.84	0.09	475.2	15	1	792	1,267		13	101	24	1.50	33	1	35					2.0	2.0	211	0.18	84	9	211								
CITY	US 20 RT	16.75	16.84	0.09	475.2	15	1	792	1,267		13	101	24	1.50	33	1	35					2.0	2.0	211	0.18	84	9	211								
FED/ST	US 20	16.84	17.50	0.66	3484.8	30	1	11,616	9,293		93	743	348	1.50	484	1	258					2.0	2.0	1,549	1.32	620	65	1,549								
FED/ST	US 20	17.50	18.50	1.00	5280	30.5	1	17,893	14,080		141	1,126	537	1.50	746	1	391					2.0	2.0	2,347	2.00	939	98	2,347								
FED/ST	US 20	18.50	19.00	0.50	2640	30.75	1	9,020	7,040		70	563	271	1.50	376	1	196					2.0	2.0	1,173	1.00	469	49	1,173								
FED/ST	US 20	19.00	20.00	1.00	5280	30.5	1	17,893	14,080		141	1,126	537	1.50	746	1	391					2.0	2.0	2,347	2.00	939	98	2,347								
FED/ST	US 20	20.00	20.50	0.50	2640	30.25	1	8,873	7,040		70	563	266	1.50	370	1	196					2.0	2.0	1,173	1.00	469	49	1,173								
FED/ST	US 20	20.50	21.00	0.50	2640	30	1	8,800	7,040		70	563	264	1.50	367	1	196					2.0	2.0	1,173	1.00	469	49	1,173								
FED/ST	US 20	21.00	21.44	0.44	2323.2	30.25	1	7,809	6,195		62	496	234	1.50	325	1	172					2.0	2.0	1,033	0.88	413	43	1,033								
FED/ST	US 20	21.44	21.56	0.12	633.6	37.5	7	2,640	2,640		26	211	79	1.50	110	1	73					2.0	2.0	282	0.24	113	12	282								
FED/ST	US 20	21.56	21.62	0.06	316.8	45	7	1,584	1,584		16	127	48	1.50	66	1	44					2.0	2.0	141	0.12	56	6	141								
FED/ST	US 20	21.62	21.74	0.12	633.6	38	7	2,675	2,675		27	214	80	1.50	111	1	74					2.0	2.0	282	0.24	113	12	282								
FED/ST	US 20	21.74	23.00	1.26	6652.8	30.5	1	22,546	22,546		225	1,804	676	1.50	939	1	626					2.0	2.0	2,957	2.52	1,183	123	2,957								
FED/ST	US 20	23.00	24.00	1.00	5280	30	1	17,600	14,080		141	1,126	528	1.50	733	1	391					2.0	2.0	2,347	2.00	939	98	2,347								
FED/ST	US 20	24.00	24.60	0.60	3168	30.25	2	10,648		10,648	106	852	319	1.50	444			1.50	444			2.0	2.0	1,408	1.20	563	59	1,408								
FED/ST	US 20	24.60	25.00	0.40	2112	30.5	2	7,157		7,157	72	573	215	1.50	298			1.50	298			2.0	2.0	939	0.80	375	39	939								
FED/ST	US 20	25.00	25.20	0.20	1056	31	2	3,637		3,637	36	291	109	1.50	152			1.50	152			2.0	2.0	469	0.40	188	20	469								
FED/ST	US 20	25.20	25.34	0.14	739.2	32	8,9,10	2,628		2,628	26	210	79	1.50	110			1.50	110			2.0	2.0	329	0.28	131	14	329								
FED/ST	US 20	25.34	25.45	0.11	580.8	39.25	3	2,533		2,533	25	203	76	1.50	106			1.50	106			2.0		129	0.11	52	5	129								
FED/ST	US 20	25.45	25.49	0.04	211.2	45.25	3	1,062		1,062	11	85	32	1.50	44			1.50	44			2.0		47	0.04	19	2	47								
FED/ST	US 20	25.49	25.50	0.01	52.8	49	3	287		287	3	23	9	1.50	12			1.50	12			2.0		12	0.01	5	0	12								
FED/ST	US 20	25.50	25.52	0.02	105.6	48.5	3	569		569	6	46	17	1.50	24			1.50	24			2.0		23	0.02	9	1	23								
FED/ST	US 20	25.52	25.58	0.06	316.8	30.5	3	1,074		1,074	11	86	32	1.50	45			1.50	45			2.0		70	0.06	28	3	70								
FED/ST	US 20	25.58	25.77	0.19	1003.2	36.5	4	4,069		4,069	41	325	122	1.50	170			1.50	170																	
FED/ST	US 20	25.77	25.92	0.15	792	30.5	5	2,684		2,684	27	215	81	1.50	112			1.50	112																	
FED/ST	US 20	25.92	26.01	0.09	475.2	28.5	6	1,505		1,505	15	120	45	1.50	63			1.50	63			2.0		106	0.09	42	4	106								
FED/ST	US 20	26.01	26.50	0.49	2587.2	30	1	8,624	6,899		69	552	259	1.50	359	1	192					2.0	2.0	1,150	0.98	460	48	1,150								
FED/ST	US 20	26.50	28.50	2.00	10560	30.5	1	35,787	28,160		282	2,253	1,074	1.50	1,491	1	782					2.0	2.0	4,693	4.00	1,877	196	4,693								
FED/ST	US 20	28.50	28.69	0.19	1003.2	30.25	1	3,372	2,675		27	214	101	1.50	140	1	74					2.0	2.0	446	0.38	178	19	446								
EXTRA AREA FOR INTERSECTIONS & MAILBOX APPROACHES (HUR & LOR)									7450	2706		27.06	596		1.50	310	1	207																		
EXTRA AREA FOR PAVED DRIVES (HUR & LOR)									1008	1008												1.5	42													
EXTRA AREA FOR UNPAVED DRIVES (HUR & LOR)																													1560			7				
FED/CITY TOTALS					0.19	739				1,971		20	157	37		107		55								0.28	131	14	328							
FED/STATE TOTALS					12.34	65155				156,640		37,853	1,936	15,858	6,661		9,507		4,455		1,136		42	2		23.67	11,109	1,168	27,775							
PROJECT TOTALS					12.48	65894				158,611		37,853	1,956	16,015	6,698		9,614		4,510		1,136		42	2		23.95	11,240	1,182	28,103							

PAVEMENT & SHOULDER DATA (HURON)

HUR-20-16.35
LOR-20-0.00

* - FOR TYPICALS, SEE SHEET 15

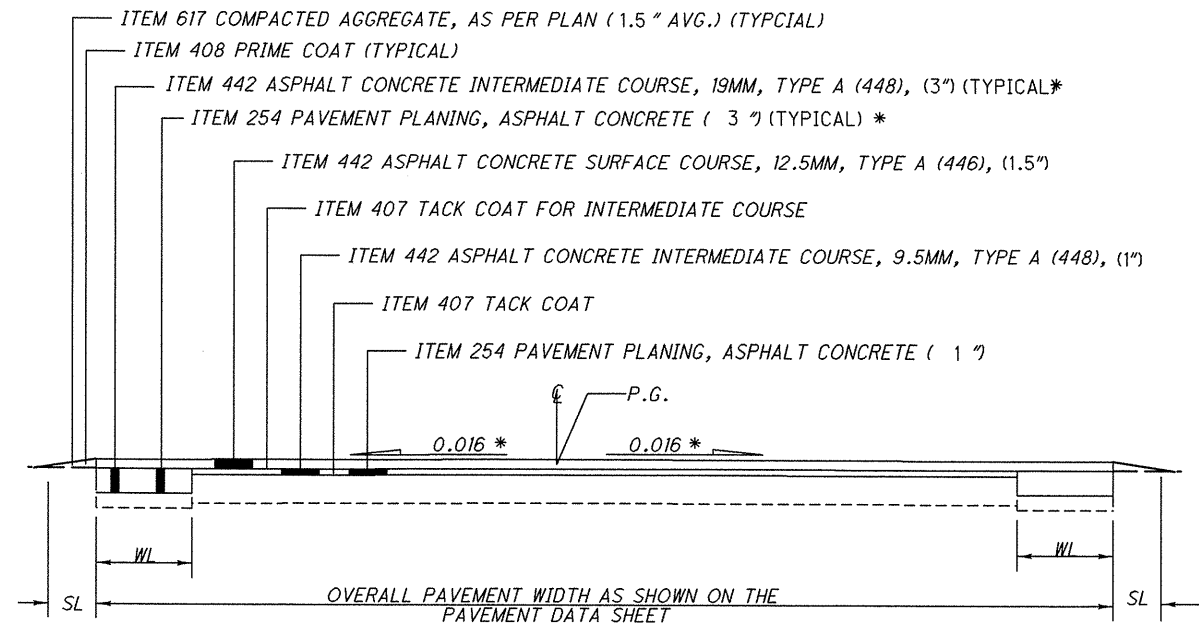
PATRICIPANION	ROUTE	LOG POINT TO LOG POINT		LENGTH		WIDTH FEET AVG.	* TYPICAL	PAVEMENT AREA SQ YD	254			407	407	442		442		604	AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA	209	408	617	617	CALC BY	
				MILE	FEET				PAVEMENT PLANING, ASPHALT CONCRETE (1.00")	PATCHING PLANED SURFACE	TACK COAT @ 0.08 GAL/SY	TACK COAT FOR INTERM. COURSE @ 0.03 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)		ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448)		MONUMENT BOX ADJUSTED TO GRADE	SL	SR	LINEAR GRADING	PRIME COAT @ 0.40 GAL/SY	COMPACTED AGGREGATE, AS PER PLAN	SHOULDER PREPARATION	CHKD BY			
													SQ.YD	SQ.YD	GALLON	GALLON									INCH	CU.YD.	INCH
				STRAIGHT LINE MILEAGE																							
FED/ST	US 20	0.00	0.50	0.50	2640	31.25	1	9,167	7,040		70	563	275	1.5	382	1	196			2.0	2.0	1,173	1.00	469	49	1,173	LORAIN
FED/ST	US 20	0.50	1.00	0.50	2640	30.5	1	8,947	7,040		70	563	268	1.5	373	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	1.00	2.00	1.00	5280	30	1	17,600	14,080		141	1,126	528	1.5	733	1	391			2.0	2.0	2,347	2.00	939	98	2,347	
FED/ST	US 20	2.00	2.50	0.50	2640	31	1	9,093	7,040		70	563	273	1.5	379	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	2.50	3.00	0.50	2640	32.5	1	9,533	7,040		70	563	286	1.5	397	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	3.00	3.50	0.50	2640	32.5	1	9,533	7,040		70	563	286	1.5	397	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	3.50	4.00	0.50	2640	32	1	9,387	7,040		70	563	282	1.5	391	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	4.00	4.50	0.50	2640	32.25	1	9,460	7,040		70	563	284	1.5	394	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	4.50	5.00	0.50	2640	32.5	1	9,533	7,040		70	563	286	1.5	397	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	5.00	5.50	0.50	2640	32.75	1	9,607	7,040		70	563	288	1.5	400	1	196			2.0	2.0	1,173	1.00	469	49	1,173	
FED/ST	US 20	5.50	6.02	0.52	2745.6	33	1	10,067	7,322		73	586	302	1.5	419	1	203			2.0	2.0	1,220	1.04	488	51	1,220	
FED/STATE TOTALS				6.02	31786				84,762		844	6,779	3,358		4,662		2,358					12.04	5,648	590	14,124	14	
PROJECT TOTALS				6.02	31786				84,762		844	6,779	3,358		4,662		2,358					12.04	5,648	590	14,124	107	

PAVEMENT & SHOULDER DATA (LORAIN)

HUR-20-16.35
LOR-20-0.00

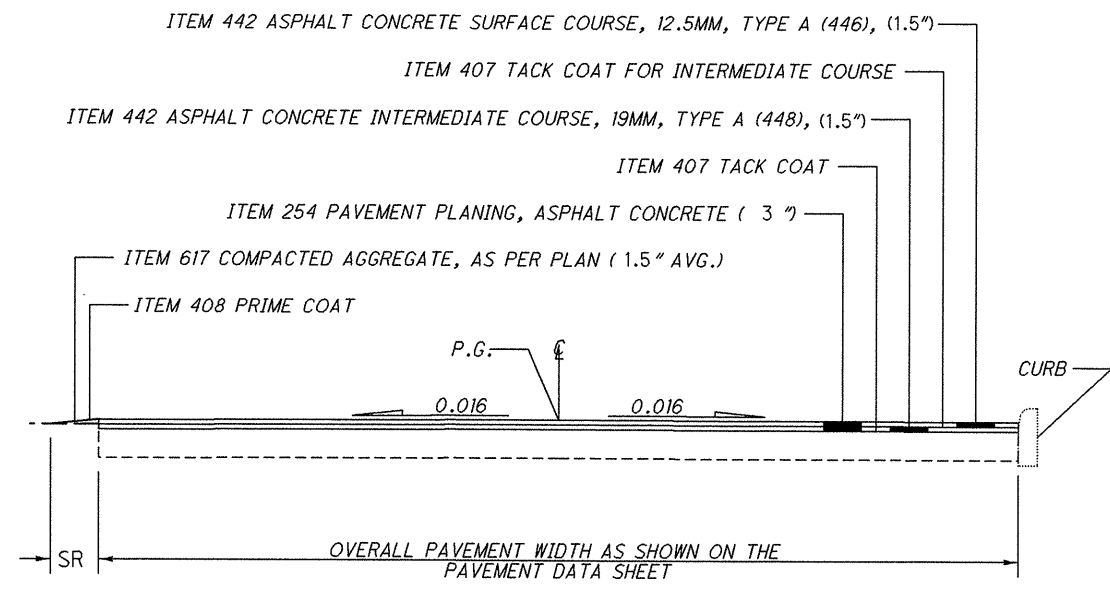
TYPICAL SECTIONS

HUR-20-16.35
LOR-20-0.00

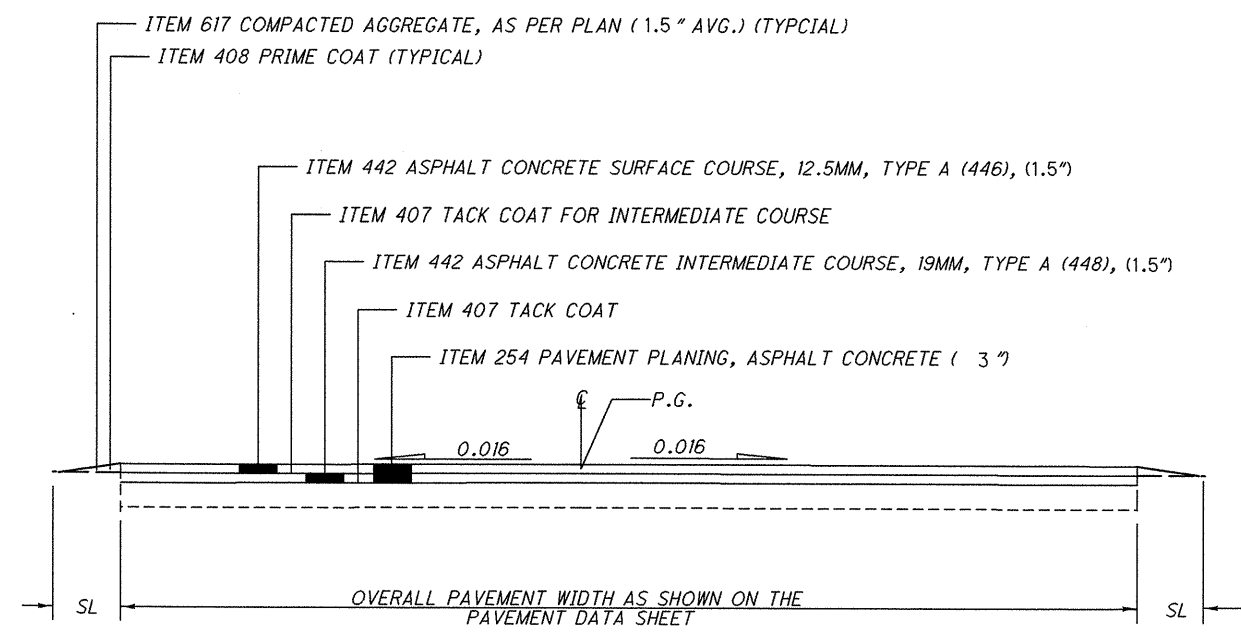


TYPICAL 1

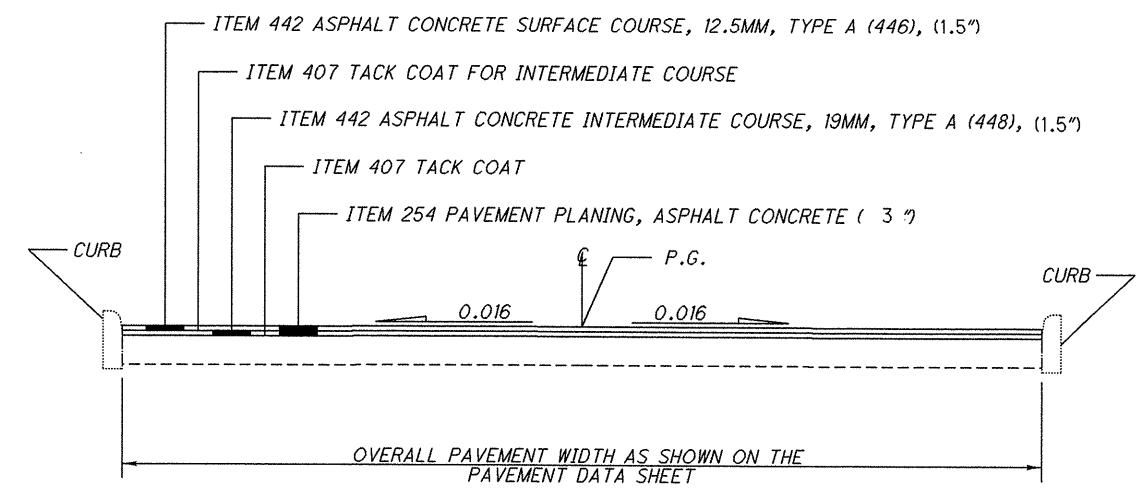
* AS DIRECTED BY THE PROJECT ENGINEER.



TYPICAL 3

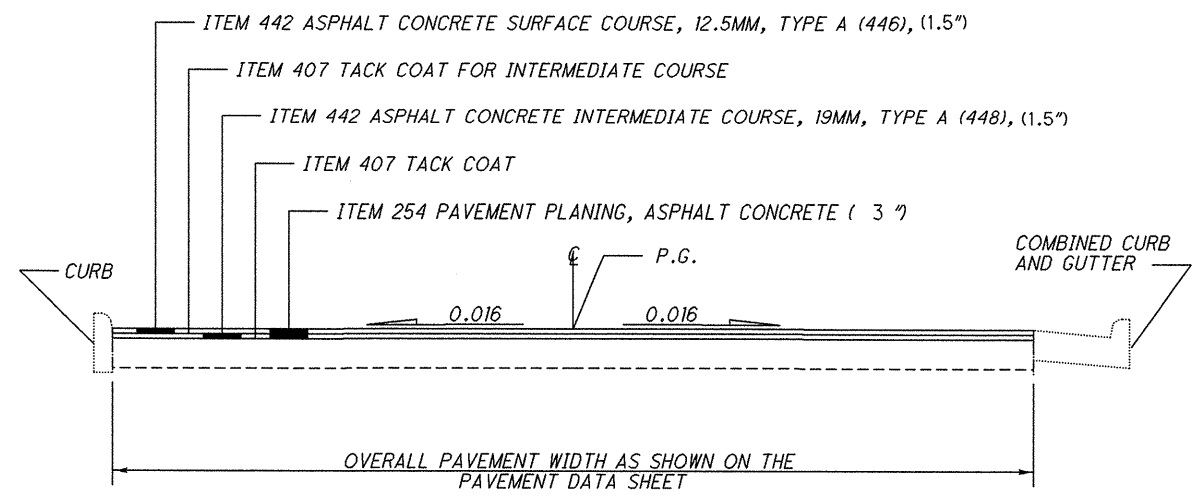


TYPICAL 2

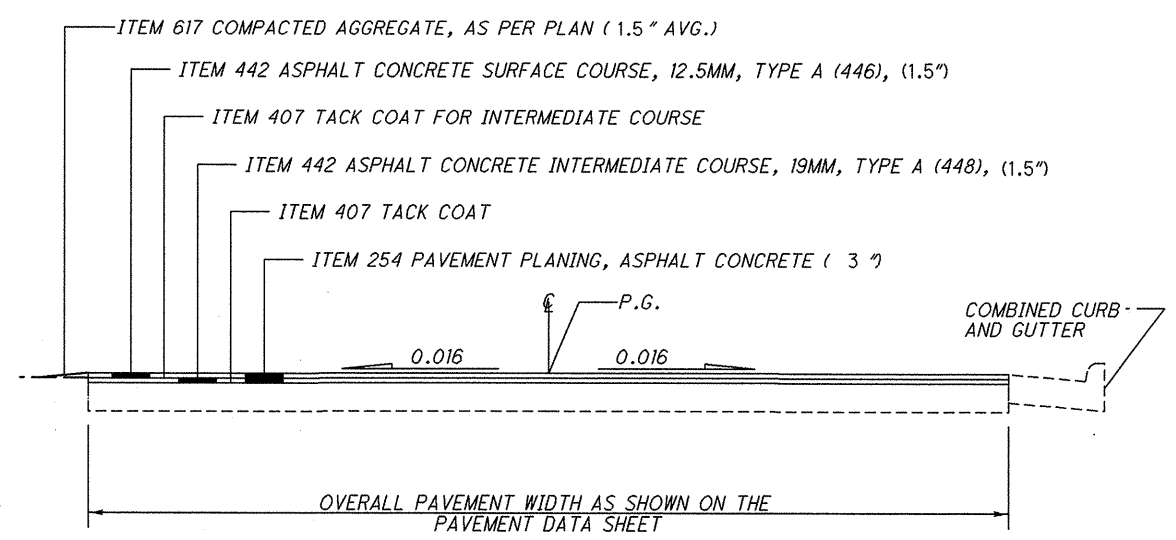
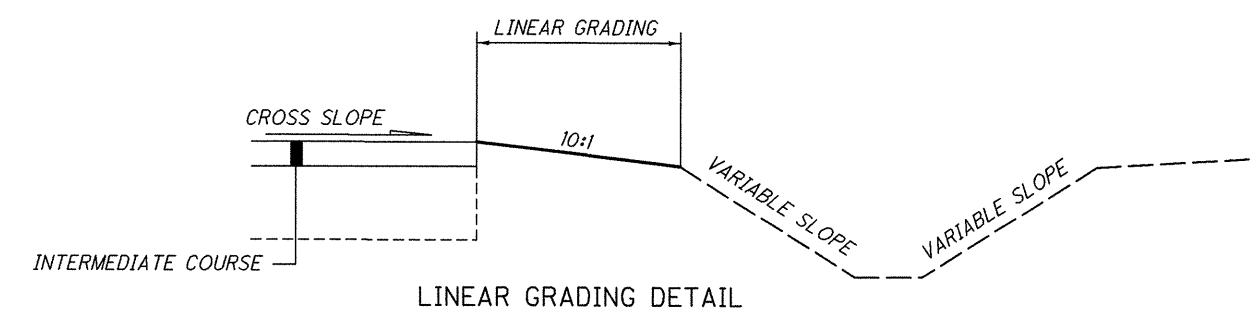


TYPICAL 4

DESIGN FILE: i:\projects\77284\77284Y005.dgn
WORKSTATION: mrobinst
DATE: 10/12/2007



TYPICAL 5



TYPICAL 6

FOR TYPICAL SECTION 7, SEE SHEET 33.
FOR TYPICAL SECTION 8, SEE SHEET 53.
FOR TYPICAL SECTION 9, SEE SHEET 54.
FOR TYPICAL SECTION 10, SEE SHEET 55.

DESIGN FILE: I:\projects\77284\77284GY005.dgn
WORKSTATION: mrobins1 DATE: 10/12/2007

ITEM 201 - CLEARING AND GRUBBING

USE THIS ITEM AT THE LOCATIONS INDICATED IN THE PLANS AND AT LOCATIONS DIRECTED BY THE ENGINEER. THIS WORK SHALL CONSIST OF CLEARING ALL TREES AND STUMPS UNDER 12" IN SIZE 10' FROM THE FACE OF GUARDRAIL, BUT NOT THE VEGETATION. STUMPS CAN BE LEFT FLUSH WITH THE GROUND LEVEL. DISPOSE OF ALL MATERIAL ACCORDING TO 105.16 AND 105.17. ALL ABOVE WORK SHALL BE PAID FOR AS ITEM 201, LUMP, CLEARING AND GRUBBING.

ITEM 202 - ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98

THIS ITEM CONSISTS OF REMOVING AN EXISTING ANCHOR ASSEMBLY, AND SALVAGING FOR REUSE AT A LOCATION SHOWN ON THE PLANS. THE RESULTING HOLES SHALL BE BACKFILLED AND COMPACTED. ELEMENTS THAT ARE NOT SALVAGEABLE SHALL BE DISPOSED OF PER 202.02.

ITEM 203 - EMBANKMENT, AS PER PLAN

AT SPECIFIED LOCATIONS AND LOCATIONS AS DIRECTED BY THE ENGINEER, EMBANKMENT SHALL BE PLACED AS TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND TO PROVIDE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

EMBANKMENT MATERIAL SHALL BE LIMITED TO CMS ITEM 304 LIMESTONE.

AREAS WHERE EMBANKMENT MATERIAL IS TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENT IS PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO COMPACT 95% OF STANDARD PROCTOR TO THE SATISFACTION OF THE ENGINEER.

THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE BY THE NUMBER OF CUBIC YARDS CONVERTED BY TICKET WEIGHT IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE.

ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN

THE BRIDGE TERMINAL ASSEMBLY SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. GR-3.4 WITH THE EXCEPTION THAT ONLY 1 SECTION OF W-BEAM SHALL BE PROVIDED INSTEAD OF THE 2 SECTIONS OF W-BEAM RAIL (NESTED).

ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN

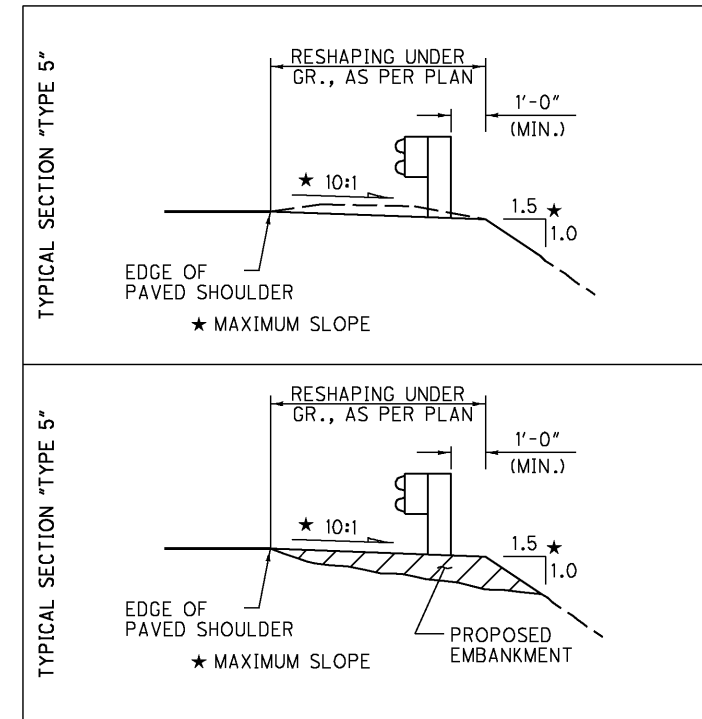
THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

THIS WORK SHALL BE COMPLETED AT LOCATIONS SPECIFIED FOR WORK AS WELL AS PER CMS 209.05 AND AS DESCRIBED HEREIN, AND SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

THE AREA IN FRONT OF, UNDER, AND BEHIND THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAXIMUM (SEE DETAIL BELOW AS WELL AS THE GUARDRAIL DETAIL SHEETS FOR FURTHER DETAILS AND INFORMATION OF THE LIMITS OF THIS WORK).

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE ABOVE WORK SHALL BE PAID FOR PER STATION WITH ITEM 209, RESHAPING UNDER GUARDRAIL, WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.



ITEM 606 - GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5

WHERE DESIGNATED ON THE PLAN, THE EXISTING GUARDRAIL, TYPE 5 SHALL BE RAISED OR LOWERED ON THE EXISTING WOOD POSTS AS PER STANDARD DRAWING GR-2.1 SO AS TO OBTAIN THE STANDARD 27.75 IN. HEIGHT. THE RAIL SHALL BE REATTACHED TO THE POSTS USING NEW POST BOLTS. FOR RAIL THAT REQUIRES BEING LOWERED THE POSTS SHALL BE CUT OR TRIMMED AND THE TOPS SHALL BE TREATED.

THE RAIL SHALL BE DISMANTLED ONLY TO THE EXTENT NECESSARY TO FIELD BORE NEW BOLT HOLES IN THE WOOD POSTS, AND TO RECONNECT THE RAIL AND BLOCK TO EXISTING POSTS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID FOR ITEM 606, GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5, WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 606 - GUARDRAIL, MISC.: GUARDRAIL RAIL ELEMENT

THIS ITEM SHALL BE USED IN CONJUNCTION WITH ITEMS 606 - GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL, AND ITEM 606 - GUARDRAIL REBUILT, TYPE 5, AND AS DIRECTED BY THE ENGINEER. IT SHALL CONSIST OF REPLACING EXISTING GUARDRAIL RAIL ELEMENTS DEEMED BY THE ENGINEER TO BE INSUFFICIENT. THE RAIL ELEMENTS SHALL BE OF THE SAME TYPE, AND SIZE OF THE EXISTING GUARDRAIL RUN. THEY SHALL BE PLACED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-1.1.

ITEM 606 - GUARDRAIL REBUILT, TYPE 5

THIS ITEM SHALL BE USED WHEN GUARDRAIL REQUIRES REPAIRS IN WHICH THE RAIL ELEMENT IS REUSABLE. ALSO, THIS ITEM WILL BE USED TO RE-ALIGN GUARDRAIL RUNS, AS DIRECTED BY THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT, AS DESCRIBED IN 606.05 AND TO INCLUDE REMOVAL AND REPLACEMENT OF ANY AND ALL DAMAGED MATERIAL, (REUSING THE RAIL ELEMENT), INCLUDING REPLACEMENT OF ANY MATERIALS DAMAGED DURING DISMANTLING OR ANY MATERIALS WHICH MAY HAVE DETERIORATED TO THE POINT THEY CANNOT BE REUSED.

CONNECTING GUARDRAIL TO EXISTING RAIL

IN LOCATIONS WHERE TYPE 5 GUARDRAIL, TERMINAL ASSEMBLIES, ETC. ARE TO BE CONNECTED TO EXISTING RAIL SOME MODIFICATIONS MAY BE REQUIRED, INCLUDING EXTRA POSTS, DRILLING HOLES AND POSSIBLY PARTIAL SECTIONS OF ADDITIONAL RAIL ELEMENTS. THE COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE 5 GUARDRAIL. IF ADDITIONAL PORTIONS OF RAIL ELEMENT ARE USED THE LINEAL MEASUREMENT OF THIS ADDITIONAL PORTION SHALL BE ADDED FOR PAYMENT.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

GUARDRAIL REPAIR AND/OR REPLACEMENT

THE FOLLOWING ITEMS LISTED BELOW SHALL BE USED FOR THE REPAIR AND/OR REPLACEMENT OF DAMAGED GUARDRAIL NOTICED DURING THE COMPLETION OF OTHER WORK INCLUDED IN THIS PLAN. THE ABOVE WORK SHALL BE COMPLETED AS DIRECTED BY THE ENGINEER.

- ITEM 202, GUARDRAIL REMOVED
- ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A
- ITEM 606, GUARDRAIL, TYPE 5
- ITEM 606, ANCHOR ASSEMBLY, TYPE E-98
- ITEM 209 RESHAPING UNDER GUARDRAIL

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE GUARDRAIL, INSTALL EMBANKMENT, GRADE AND REINSTALL GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

LOCATIONS OF GUARDRAIL

THE GUARDRAIL PROTECTION PROVIDED IN THIS PLAN SHALL BE LOCATED IN THE FIELD TO ASSURE THAT THE INSTALLATION WILL AFFORD THE MAXIMUM PROTECTION FOR TRAFFIC. THIS LOCATION SHALL BE POSITIONED AS FAR AS POSSIBLE FROM THE EDGE OF PAVEMENT WHILE MAINTAINING PROPER GRADE IN FRONT OF GUARDRAIL AS PER STANDARD DRAWINGS AND PLAN DETAILS.

BRIDGE LOCATION MARKER SIGN

THE BRIDGE LOCATION MARKER SIGN INDICATES THE COUNTY, THE ROUTE, AND THE STRAIGHT LINE MILEAGE OF THE STRUCTURE. THE CONTRACTOR SHALL REMOVE THE EXISTING BRIDGE LOCATION MARKER SIGNS AND REERECT THE SIGNS IN KIND. IF THERE ARE ANY QUESTIONS ON THE LOCATION, PLEASE CONTACT THE DISTRICT BRIDGE ENGINEER.

ALL COSTS, INCLUDING THE SIGN REMOVAL, SIGN REERECTION, POST REMOVAL, AND POST INSTALLATION SHALL BE INCLUDED IN THE FOLLOWING PAY ITEMS:

- ITEM 630 GROUND MOUNTED SUPPORT, NO. 2. POST 52.5 FT
- ITEM 630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION 6 EACH
- ITEM 630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL 2 EACH

DESIGN FILE: I:\projects\77284\77284GN002.dgn
WORKSTATION: sdeer DATE: 11/15/2007

ITEM 606 - ANCHOR ASSEMBLY REBUILT, TYPE B-98

THIS ITEM SHALL CONSIST OF REUSING SALVAGED ELEMENTS FROM AN EXISTING ANCHOR ASSEMBLY, AND CONSTRUCTING A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY AT A LOCATION SHOWN IN THE PLANS. THE ANCHOR ASSEMBLY SHALL BE RECONSTRUCTED AS PER THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6" (11.43 m), INCLUSIVE OF THREE 12'-6" (3.81 m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS444 SS444M	SRT-350 (12.5, 8 Post) Slotted Rail Terminal Post Layout and Erection Details	7/12/99 Rev. 1 7/12/99	08/27/99
SS425M	Slotted Rail Terminal SRT-350 Post Layout and Erection Details (12.5, 9 Post)	6/21/97 Rev. 1	03/6/98

2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224 (TELEPHONE: 330.346.0721).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6" (11.43 m), INCLUSIVE OF THREE 12'-6" (3.81 m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
FLT-M	Flared Energy Absorbing Terminal (FLEAT-350) Assembly	04/16/98	07/31/98

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36 IN. WIDE x 12 IN. HIGH (915 mm W x 305 mm H) FOR THE SRT-350 AND 14 IN. WIDE x 20 IN. HIGH (350 mm W x 500 mm H) FOR THE FLEAT-350.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY REBUILT, TYPE B-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE ST., GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (7.62 m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO 44224 (TELEPHONE: 330-346-0721)

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" x 18" (450mm X 450mm).

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY REBUILT, TYPE E-98

THIS ITEM SHALL CONSIST OF REUSING SALVAGED ELEMENTS FROM AN EXISTING ANCHOR ASSEMBLY, AND CONSTRUCTING A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY AT A LOCATION SHOWN IN THE PLANS.

THE ANCHOR ASSEMBLY SHALL BE RECONSTRUCTED AS PER THE FOLLOWING GUARDRAIL END TERMINALS:

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE ST., GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (7.62 m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	SRT-350 (12.5, 8 Post) Slotted Rail Terminal Post Layout and Erection Details	6/20/97	3/6/98
SS142	Slotted Rail Terminal SRT-350 Post Layout and Erection Details (12.5, 9 Post)	4/12/00	7/31/00
SS141	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO 44224 (TELEPHONE: 330-346-0721)

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	FOUNDATION TUBES SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" x 18" (450mm X 450mm).

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

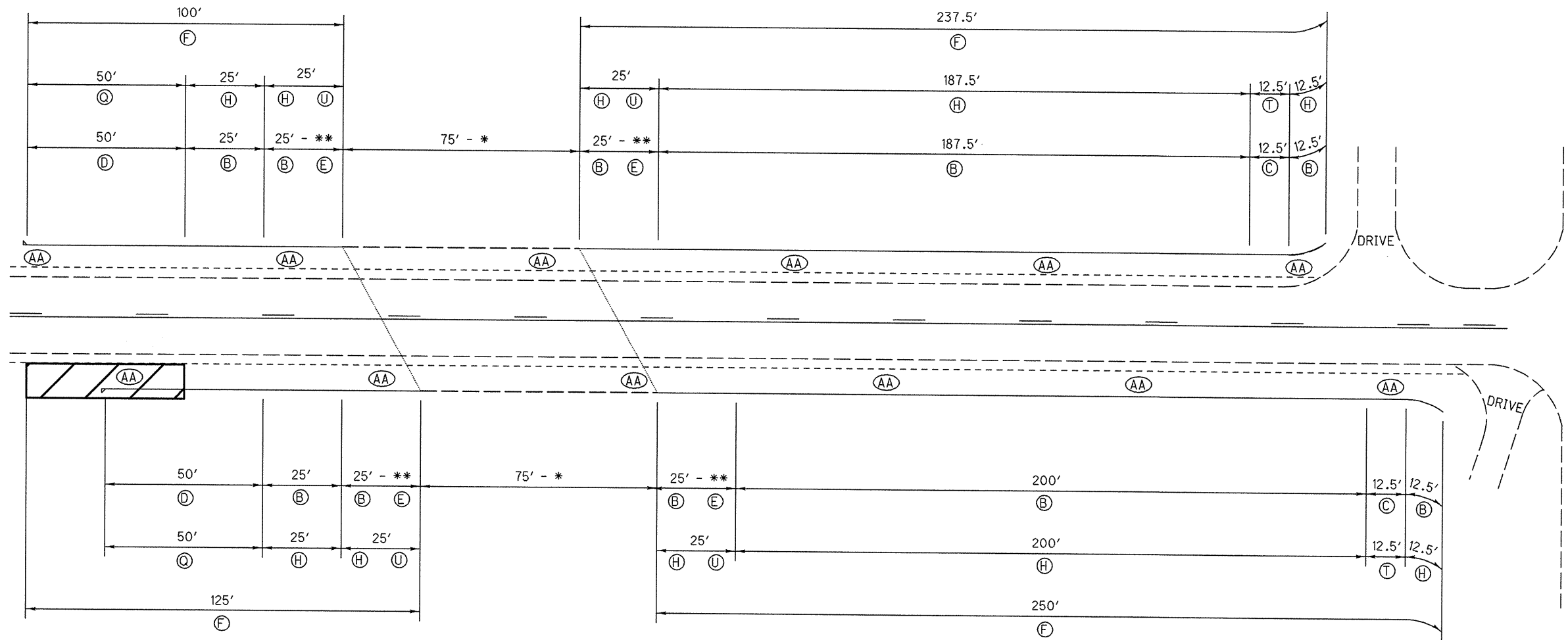
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY REBUILT, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

SHEET	ITEM																												CALCD	MER	CHECKED	BAD			
	202	202	202	202	202	202	202	202	203	203	209	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606					606	638	
	GUARDRAIL REMOVED FT	GUARDRAIL REMOVED FOR REUSE FT	ANCHOR ASSEMBLY REMOVED FOR REUSE EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98 EACH	ANCHOR ASSEMBLY REMOVED EACH	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE EACH	GUARDRAIL POST REMOVED EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE B-98 EACH	EXCAVATION, AS PER PLAN CY	EMBANKMENT, AS PER PLAN CY	RESHAPING UNDER GUARDRAIL, AS PER PLAN STATION	GUARDRAIL, TYPE 5 FT	GUARDRAIL REBUILT, TYPE 5 FT	GUARDRAIL, TYPE 5, LONG- SPAN FT	ANCHOR ASSEMBLY, TYPE E-98 EACH	ANCHOR ASSEMBLY REBUILT, TYPE E-98 EACH	ANCHOR ASSEMBLY, TYPE A EACH	ANCHOR ASSEMBLY, TYPE T EACH	ANCHOR ASSEMBLY REBUILT, TYPE T EACH	ANCHOR ASSEMBLY REBUILT, TYPE B-98 EACH	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4 EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4 EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN EACH	GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5 FT	GUARDRAIL POST EACH	BARRIER REFLECTOR, TYPE A EACH	BARRIER REFLECTOR, TYPE B EACH	MANHOLE ADJUSTED TO GRADE EACH	CATCH BASIN ADJUSTED TO GRADE EACH	INLET ADJUSTED TO GRADE EACH	VALVE BOX ADJUSTED TO GRADE EACH			
HURON																																			
17.74		562.50	2	2		4			10	7.13			562.50		2				2																
22.27		268.75	1	3				25	50	5.19	37.50	268.75			3				1																
22.84	271.88			3	1			15	85	5.88	350.00				3		1																		
24.50	312.50			4				25	65	7.50	450.00				4																				
25.63	37.50	87.50		2					10	2.75	62.50	87.50			2																				
LORAIN																																			
2.21		275.0					4	2			4.19	275.00																							
2.72									50	3.50	200.00			37.50	1		1	1			2			4			4								
TOTAL	621.88	1193.75	3	14	1	4	4	2	65	270	36.14	1100	1193.75	37.50	1	14	1	2	3	2	4	3	16	1	25	4	61	8	9	5	10	6			

ROADWAY SUB-SUMMARY

HUR-20-16.35
LOR-20-0.00

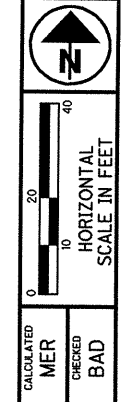
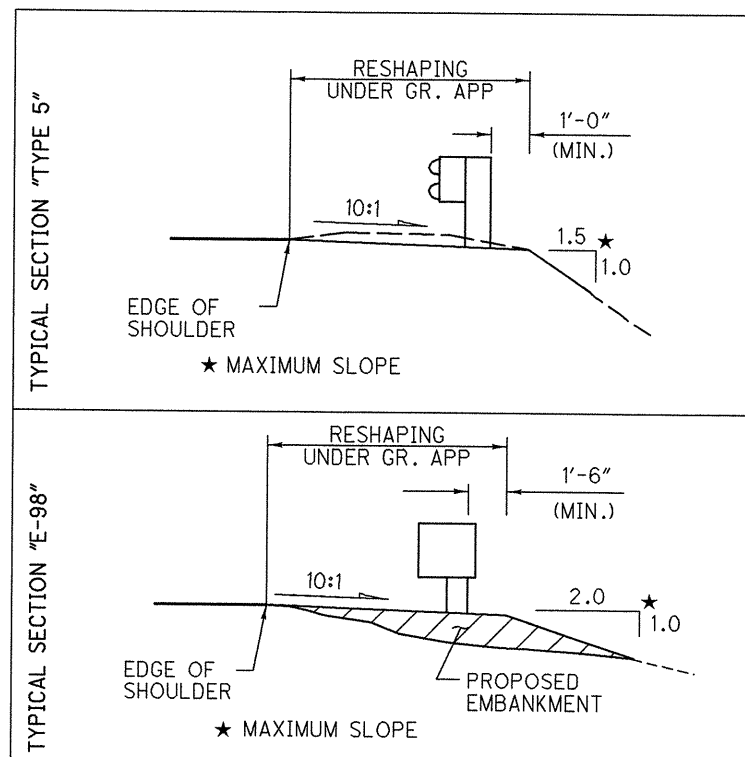
DESIGN FILE: I:\projects\77284\77284GRO01.dgn
 WORKSTATION: mrobins1 DATE: 10/3/2007



* - GUARDRAIL WITH TUBULAR BACKUP
 ** - EXISTING BRIDGE TERMINAL ASSEMBLY, TYPE 4

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
ⓑ	202	GUARDRAIL REMOVED FOR REUSE	FT	275	287.5	562.5
ⓒ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE	EACH	1	1	2
ⓓ	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE E-98	EACH	1	1	2
ⓔ	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	2	2	4
▨	203	EMBANKMENT, AS PER PLAN	CU YD		10	10
ⓕ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	3.38	3.75	7.13
ⓗ	606	GUARDRAIL REBUILT, TYPE 5	FT	275	287.5	562.5
Ⓢ	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1	1	2
Ⓣ	606	ANCHOR ASSEMBLY REBUILT, TYPE T	EACH	1	1	2
Ⓤ	606	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4	EACH	2	2	4
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	6	6	12

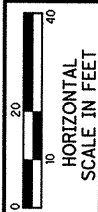
ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET, SHEET 19 .



CALCULATED
 MER
 CHECKED
 BAD

SR 601
GUARDRAIL LOCATION - HURON
SLM 17.74

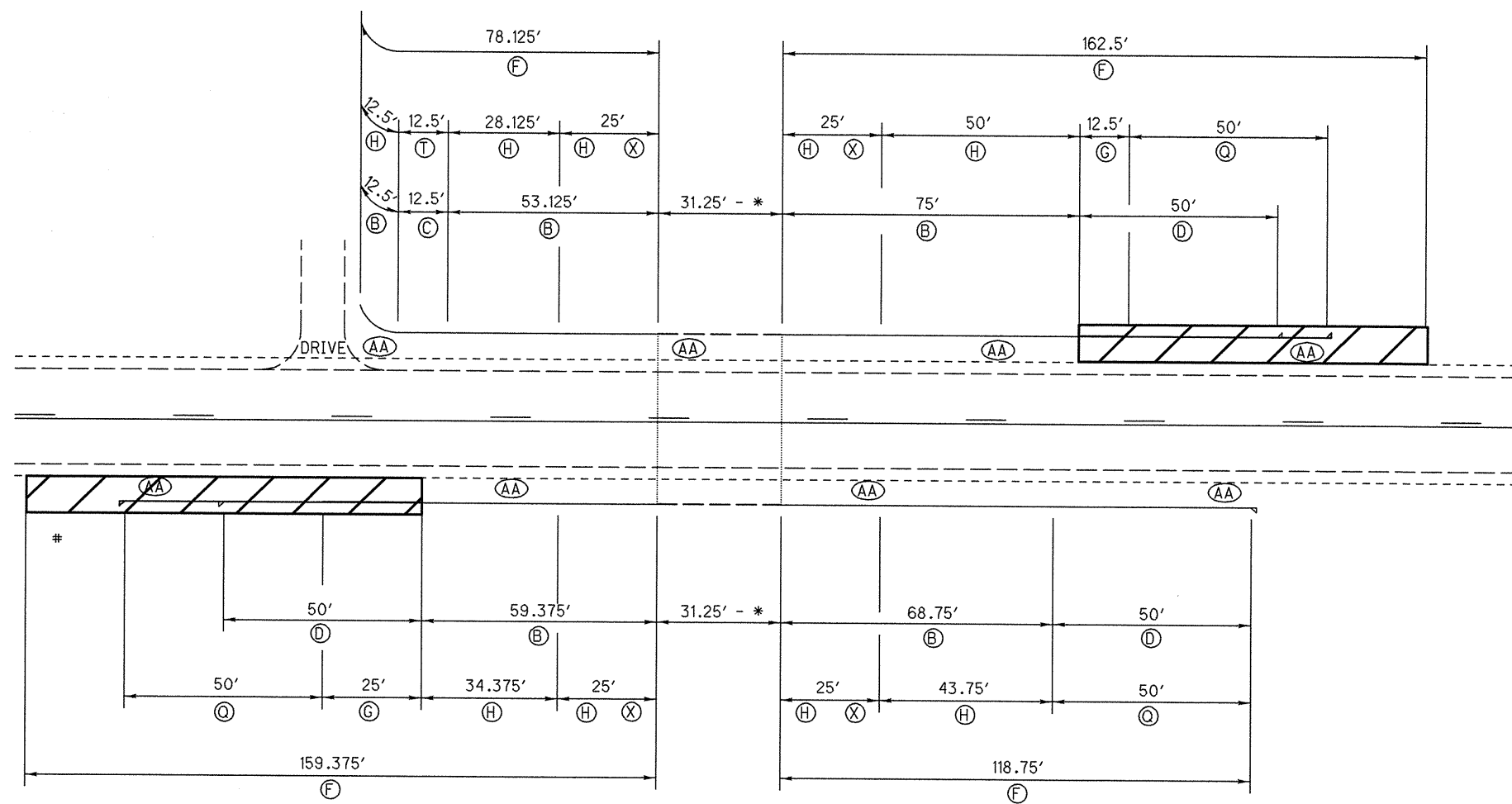
HUR-20-16.35
LOR-20-0.00



CALCULATED
MER
CHECKED
BAD

**GUARDRAIL LOCATION - HURON
SLM 22.27**

**HUR-20-16.35
LOR-20-0.00**

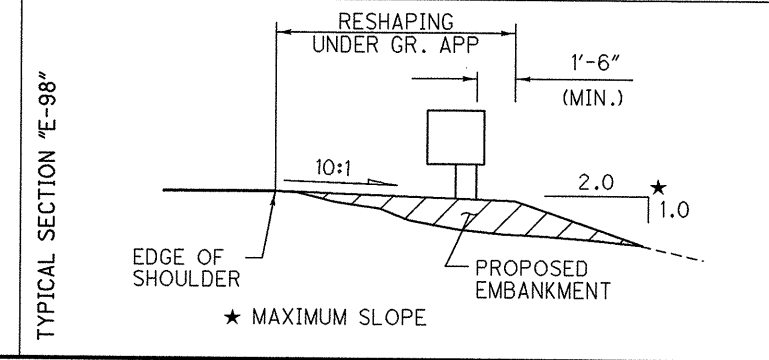
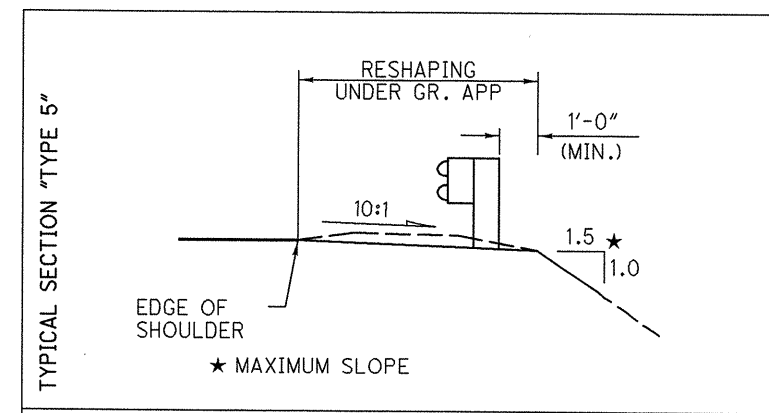


AN ESTIMATED QUANTITY 25 CY OF EXCAVATION, AS PER PLAN HAS BEEN CARRIED TO THE ROADWAY SUB-SUMMARY FOR USE IN RELOCATING THE EXISTING DITCH TO ACCOMMODATE THE ANCHOR ASSEMBLY, E-98 INSTALLATION.

* - GUARDRAIL WITH TUBULAR BACKUP

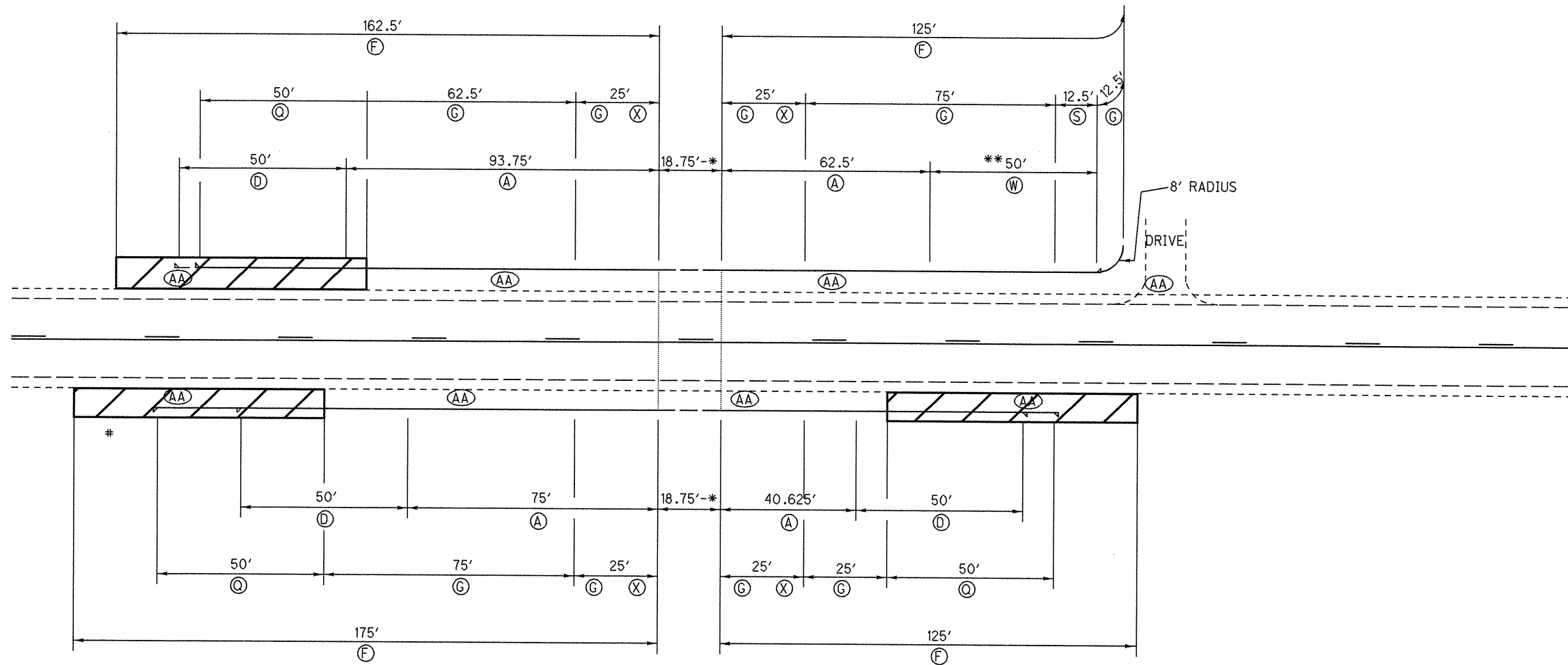
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
ⓑ	202	GUARDRAIL REMOVED FOR REUSE	FT	140.625	128.125	268.75
ⓒ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE	EACH	1		1
ⓓ	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE E-98	EACH	1	2	3
▨	203	EMBANKMENT, AS PER PLAN	CU YD	25	25	50
Ⓕ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	2.41	2.78	5.19
Ⓒ	606	GUARDRAIL, TYPE 5	FT	12.5	25	37.5
ⓗ	606	GUARDRAIL REBUILT, TYPE 5	FT	140.625	128.125	268.75
Ⓠ	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1	2	3
Ⓣ	606	ANCHOR ASSEMBLY REBUILT, TYPE T	EACH	1		1
ⓧ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	4	4	8

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET, SHEET 19 .



DESIGN FILE: I:\projects\77284\77284GR001.dgn
WORKSTATION: mrobins1 DATE: 10/3/2007

DESIGN FILE: i:\projects\77284\77284GR001.dgn
 WORKSTATION: mrobins1 DATE: 10/9/2007

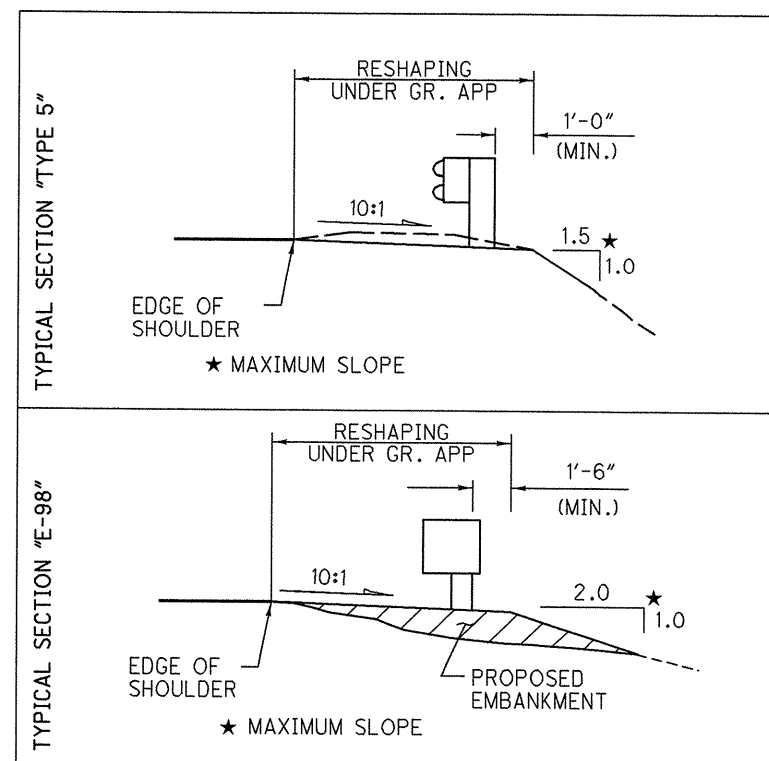


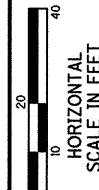
AN ESTIMATED QUANTITY 15 CY OF EXCAVATION, AS PER PLAN HAS BEEN CARRIED TO THE ROADWAY SUB-SUMMARY FOR USE IN RELOCATING THE EXISTING DITCH TO ACCOMMODATE THE ANCHOR ASSEMBLY, E-98 INSTALLATION.

* - GUARDRAIL WITH TUBULAR BACKUP
 ** - ANCHOR ASSEMBLY, TYPE E-98

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT	156.25	115.625	271.88
(W)	202	ANCHOR ASSEMBLY REMOVED	EACH	1		1
(D)	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE E-98	EACH	1	2	3
(Hatched)	203	EMBANKMENT, AS PER PLAN	CU YD	35	50	85
(F)	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	2.88	3.00	5.88
(G)	606	GUARDRAIL, TYPE 5	FT	200	150	350
(Q)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1	2	3
(S)	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
(X)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	4	4	8

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET, SHEET 19 .

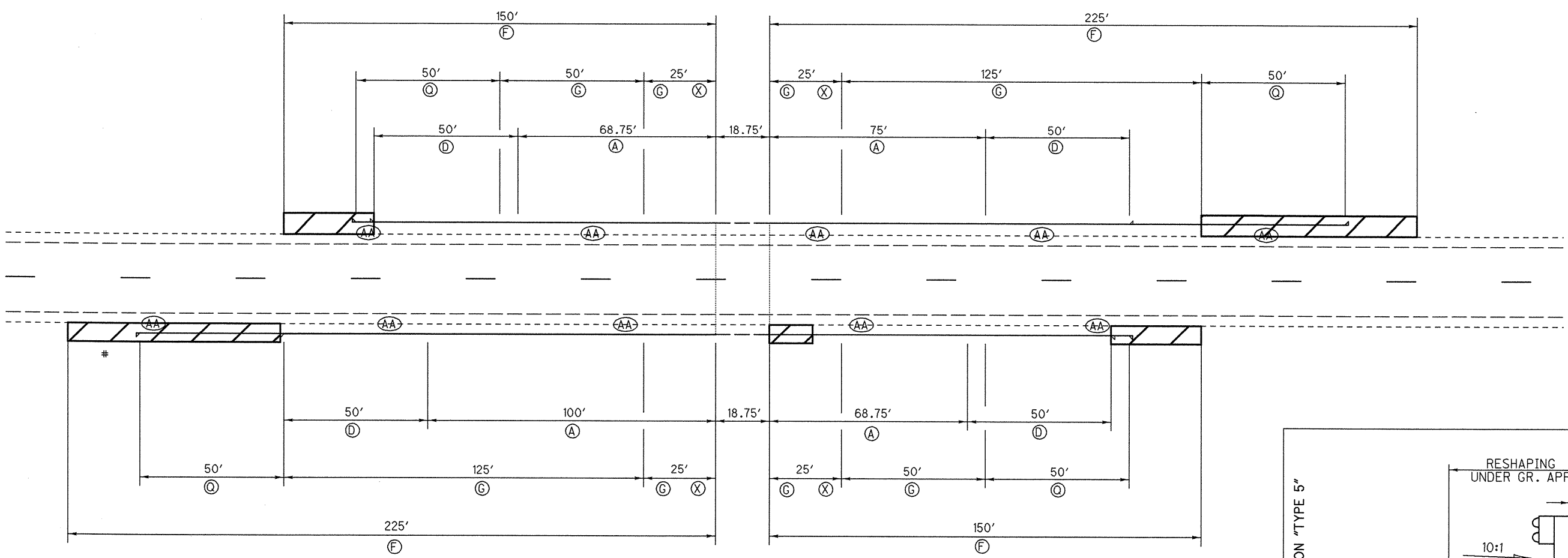




CALCULATED
MER
CHECKED
BAD

**GUARDRAIL LOCATION - HURON
SLM 24.50**

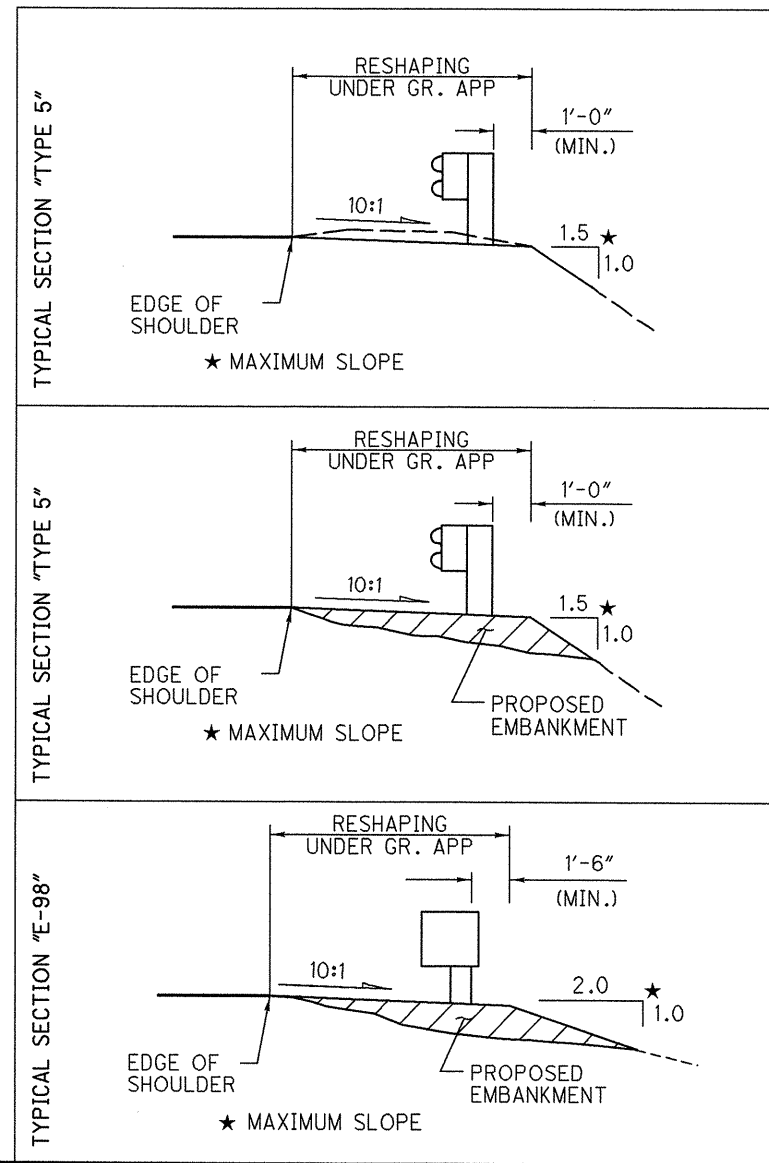
**HUR-20-16.35
LOR-20-0.00**



AN ESTIMATED QUANTITY 25 CY OF EXCAVATION, AS PER PLAN HAS BEEN CARRIED TO THE ROADWAY SUB-SUMMARY FOR USE IN RELOCATING THE EXISTING DITCH TO ACCOMMODATE THE ANCHOR ASSEMBLY, E-98 INSTALLATION.

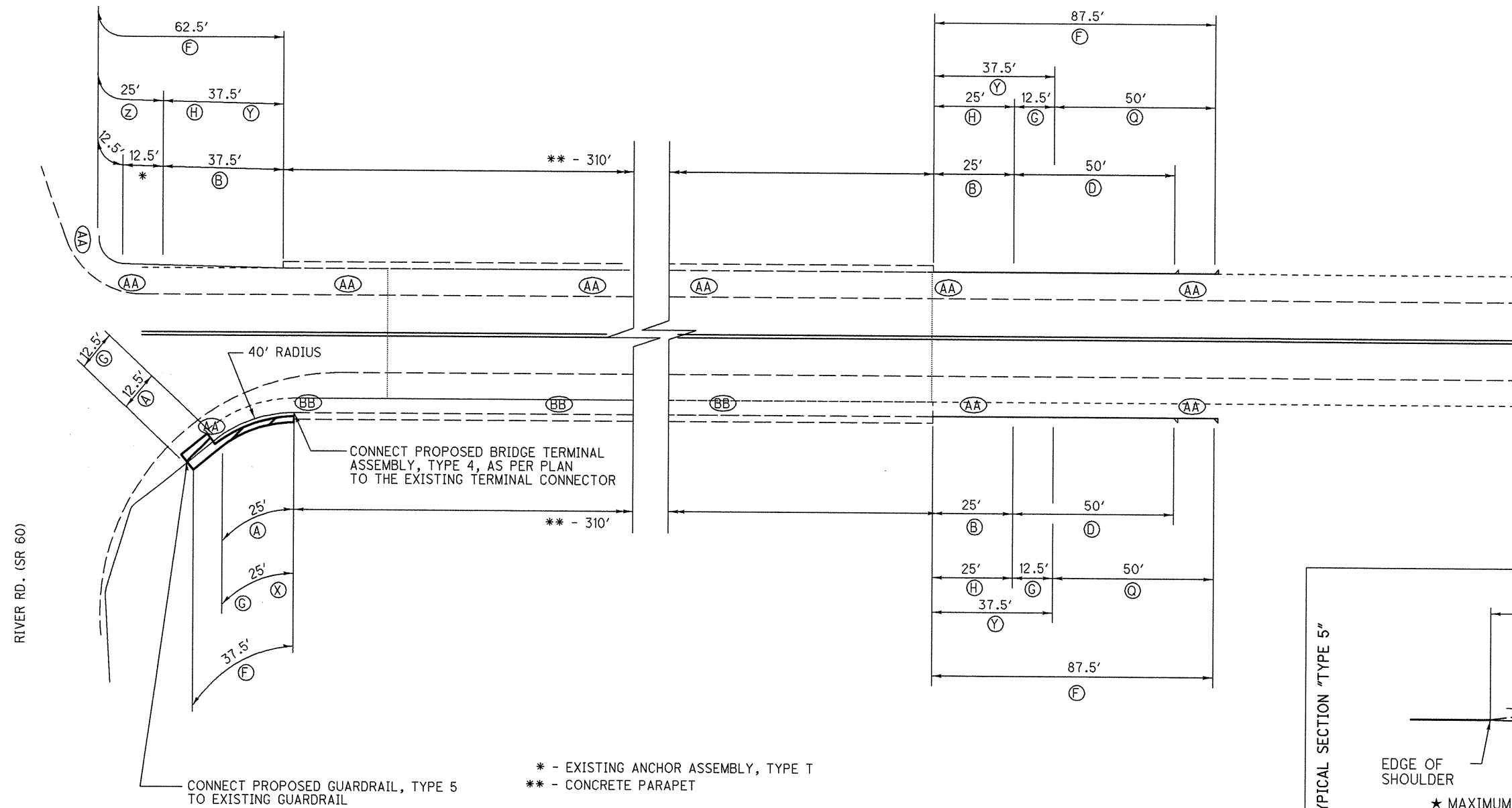
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		
				LEFT	RIGHT	TOTAL
(A)	202	GUARDRAIL REMOVED	FT	143.75	168.75	312.5
(D)	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE E-98	EACH	2	2	4
(Hatched)	203	EMBANKMENT, AS PER PLAN	CU YD	30	35	65
(F)	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	3.75	3.75	7.50
(G)	606	GUARDRAIL, TYPE 5	FT	225	225	450
(Q)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	2	2	4
(X)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	5	5	10

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET, SHEET 19 .



DESIGN FILE: i:\projects\77284\77284GR001.dgn
WORKSTATION: mrobinsl DATE: 10/3/2007

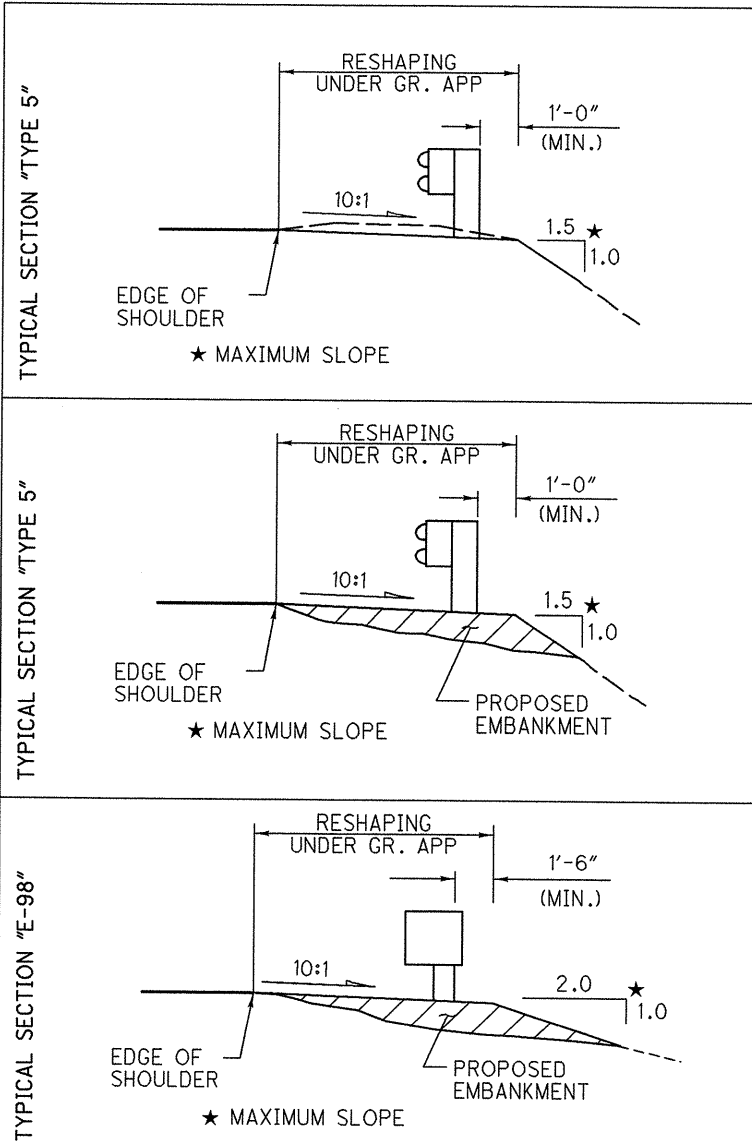
DESIGN FILE: I:\projects\7284\7284GR001.dgn
 WORKSTATION: mrobins DATE: 10/9/2007

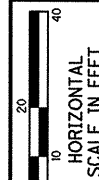


* - EXISTING ANCHOR ASSEMBLY, TYPE T
 ** - CONCRETE PARAPET

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		37.5	37.5
(B)	202	GUARDRAIL REMOVED FOR REUSE	FT	62.5	25	87.5
(D)	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE E-98	EACH	1	1	2
(E)	203	EMBANKMENT, AS PER PLAN	CU YD		10	10
(F)	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	1.50	1.25	2.75
(G)	606	GUARDRAIL, TYPE 5	FT	12.5	50	62.5
(H)	606	GUARDRAIL REBUILT, TYPE 5	EACH	62.5	25	87.5
(Q)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1	1	2
(X)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	EACH		1	1
(Y)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH	2	1	3
(Z)	606	GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5	FT	25		25
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	4	3	7
(BB)	626	BARRIER REFLECTOR, TYPE B	EACH	4	4	8

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET, SHEET 19 .

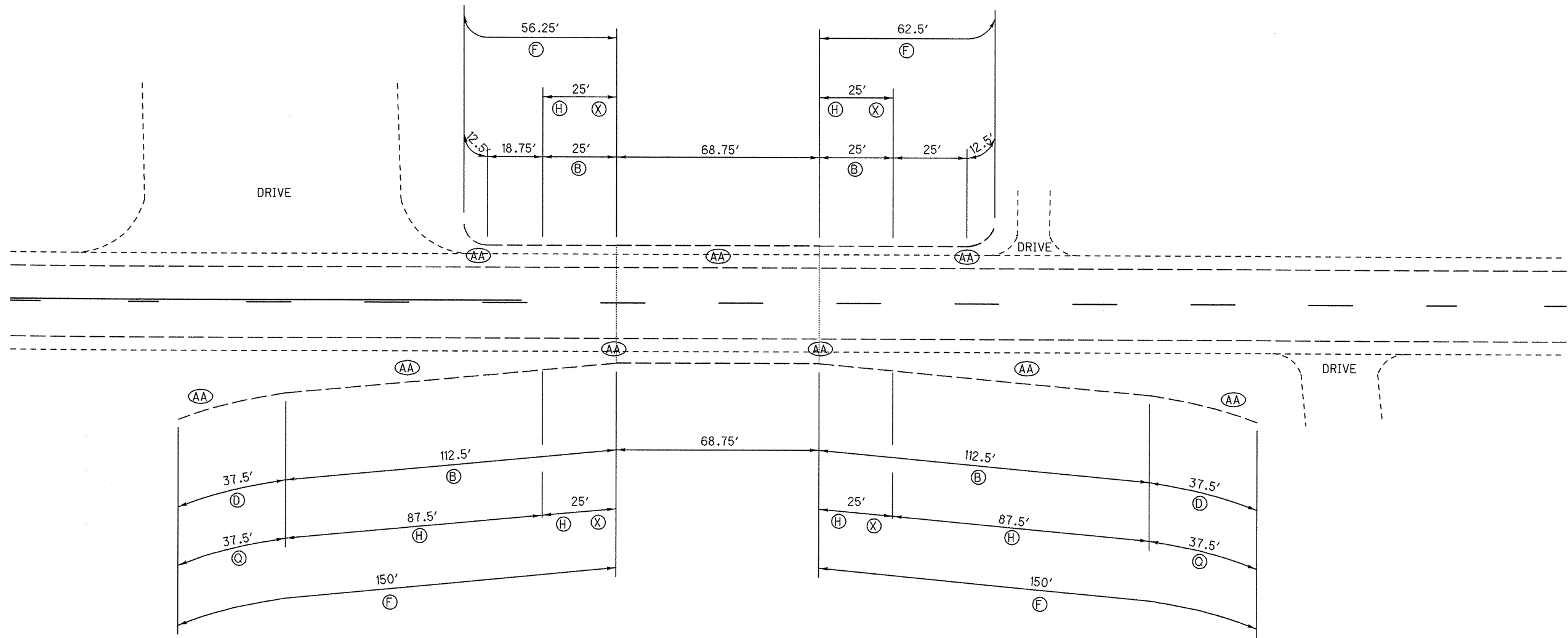




CALCULATED
MER
CHECKED
BAD

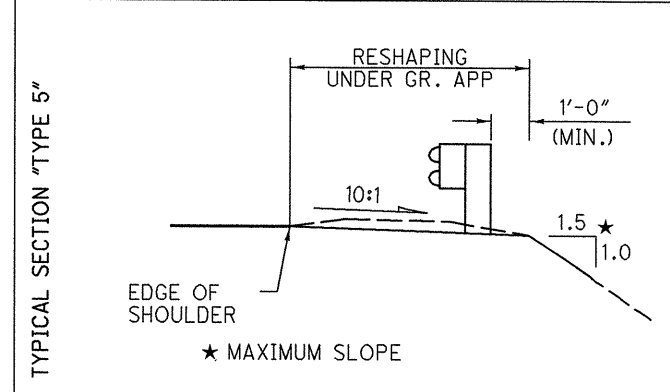
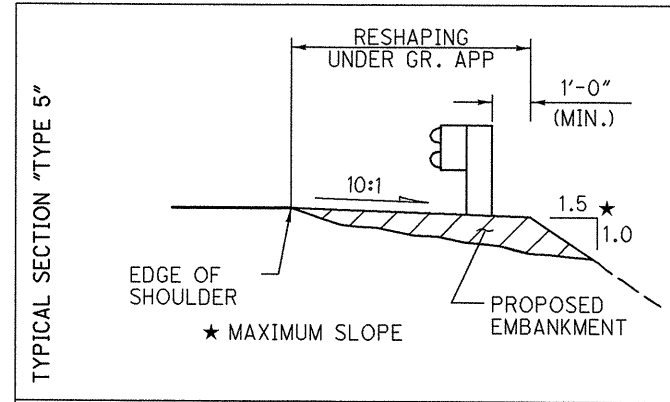
GUARDRAIL LOCATION - LORAIN
SLM 2.21

HUR-20-16.35
LOR-20-0-00



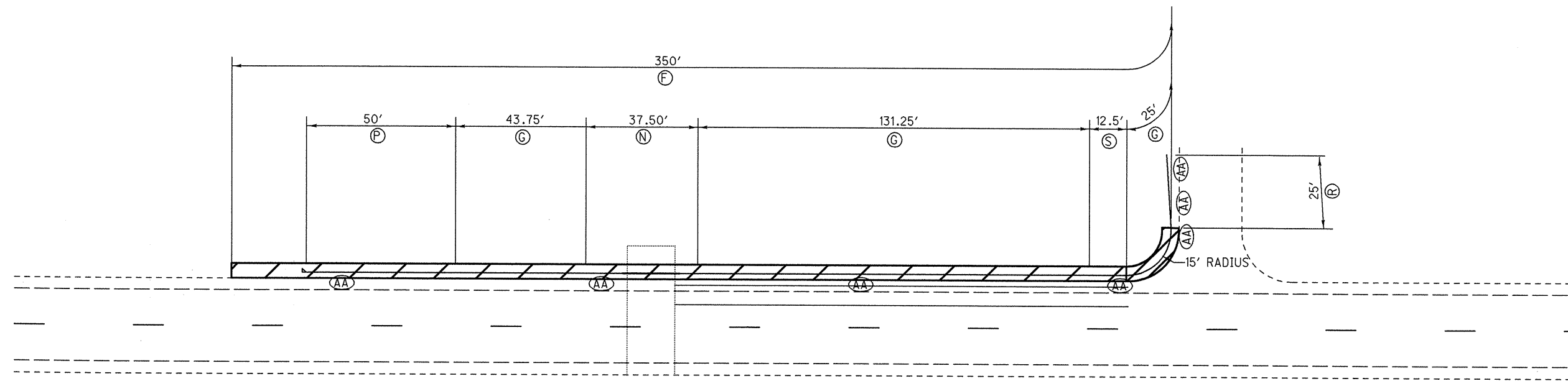
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
ⓑ	202	GUARDRAIL REMOVED FOR REUSE	FT	50	225	275
ⓓ	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE B-98	EACH		2	2
	202	GUARDRAIL POST REMOVED	EACH	4		4
ⓕ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	1.19	3.00	4.19
ⓗ	606	GUARDRAIL REBUILT, TYPE 5	FT	50	225	275
ⓐ	606	ANCHOR ASSEMBLY REBUILT, TYPE B-98	EACH		2	2
ⓧ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
	606	GUARDRAIL POST	EACH	4		4
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	3	6	9

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET, SHEET 19 .



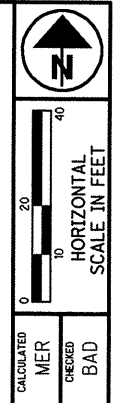
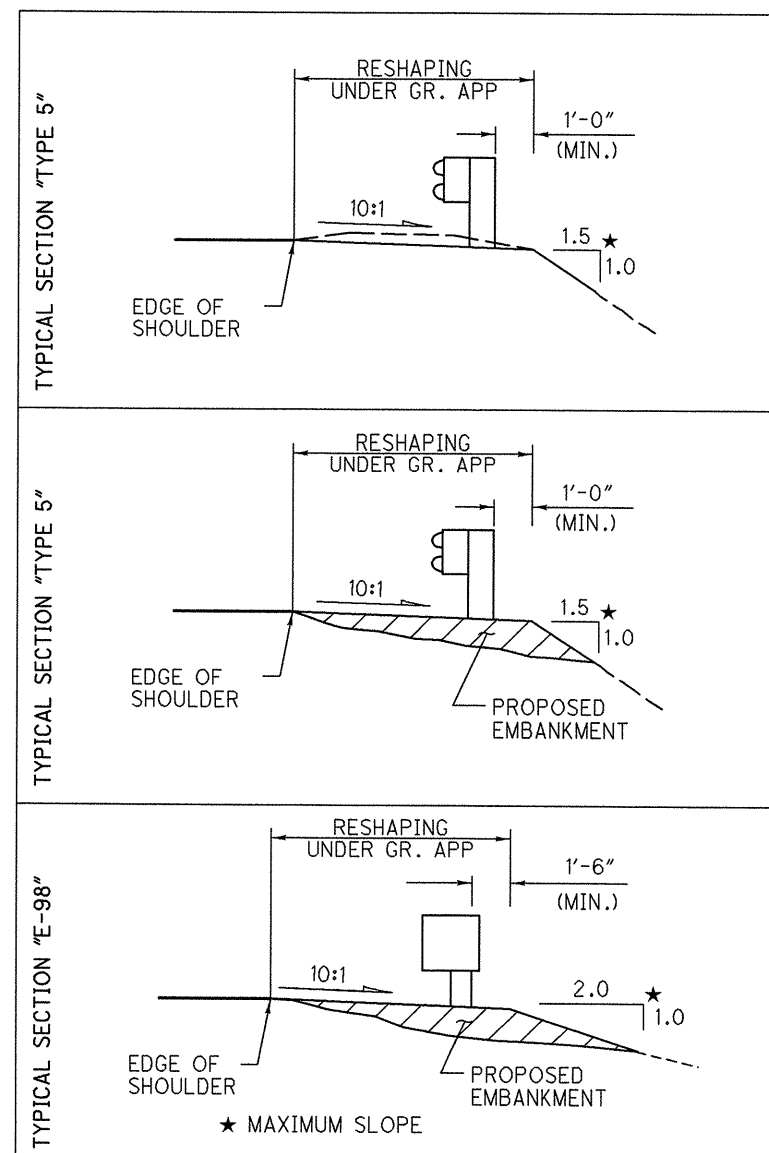
DESIGN FILE: I:\projects\77284\77284GR001.dgn
WORKSTATION: mrobins1 DATE: 10/9/2007

DESIGN FILE: i:\projects\77284\77284GR001.dgn
 WORKSTATION: mrobins DATE: 10/9/2007



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
	203	EMBANKMENT, AS PER PLAN	CU YD	50		50
ⓕ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	3.50		3.50
Ⓒ	606	GUARDRAIL, TYPE 5	FT	200		200
Ⓝ	606	GUARDRAIL, TYPE 5, LONG SPAN	FT	37.50		37.50
Ⓟ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓡ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1		1
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	7		7

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET, SHEET 19 .



CALCULATED
 MER
 CHECKED
 BAD

GUARDRAIL LOCATION LORAIN
 SLM 2.72

HUR-20-16.35
 LOR-20-0.00

ITEM 202, WALK REMOVED, AS PER PLAN

ITEM 202, WALK REMOVED IS INTENDED TO REMOVE THE EXISTING WALK, EMBANKMENT, STEPS, PAVEMENT, AND CURB RAMPS WHILE REPLACING THESE AREAS WITH CURB RAMPS WITH TRUNCATED DOMES AND CURB (IF APPLICABLE). PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, EMBANKMENT, GRADING, SEEDING AND MATERIALS NECESSARY TO REMOVE THE ABOVE LISTED ITEMS.

ITEM 608, CURB RAMP

ITEM 608, CURB RAMP IS INTENDED TO REPLACE THE EXISTING WALK, PAVEMENT, EMBANKMENT, STEPS, AND CURB RAMPS WITH CURB RAMPS WITH TRUNCATED DOMES AND CURB (IF APPLICABLE). PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, EMBANKMENT, GRADING, SEEDING, AND MATERIALS NECESSARY TO COMPLETE THE IMPROVEMENT EXCEPT WALK REMOVED, CURB REMOVED, AND CURB WILL BE PAID FOR SEPARATELY. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
DEPOT ST.	202	WALK REMOVED, AS PER PLAN	SQ FT		49	49
VERLIN ST.	202	WALK REMOVED, AS PER PLAN	SQ FT		110	110
PLEASANT ST.	202	WALK REMOVED, AS PER PLAN	SQ FT	39	278	317
COOPER ST.	202	WALK REMOVED, AS PER PLAN	SQ FT		106	106
RIVER RD. (SR60)	202	WALK REMOVED, AS PER PLAN	SQ FT		197	197
EDGEWATER	202	WALK REMOVED, AS PER PLAN	SQ FT		162	162
					TOTAL	941

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
DEPOT ST.	202	CURB REMOVED	FT		10	10
VERLIN ST.	202	CURB REMOVED	FT		5.5	5.5
COOPER ST.	202	CURB REMOVED	FT		23	23
RIVER RD. (SR60)	202	CURB REMOVED	FT		52	52
					TOTAL	90.5

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
DEPOT ST.	202	CURB AND GUTTER REMOVED	FT		38	38
					TOTAL	38

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
PLEASANT ST.	608	CURB RAMP, TYPE A1	SQ FT		278	278
COOPER ST.	608	CURB RAMP, TYPE A1	SQ FT		49	49
RIVER RD. (SR60)	608	CURB RAMP, TYPE A1	SQ FT		99	99
					TOTAL	426

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
DEPOT ST.	608	CURB RAMP, TYPE A2	SQ FT		49	49
VERLIN ST.	608	CURB RAMP, TYPE A2	SQ FT		110	110
PLEASANT ST.	608	CURB RAMP, TYPE A2	SQ FT	39		39
COOPER ST.	608	CURB RAMP, TYPE A2	SQ FT		57	57
RIVER RD. (SR60)	608	CURB RAMP, TYPE A2	SQ FT		98	98
EDGEWATER	608	CURB RAMP, TYPE A2	SQ FT		162	162
					TOTAL	515

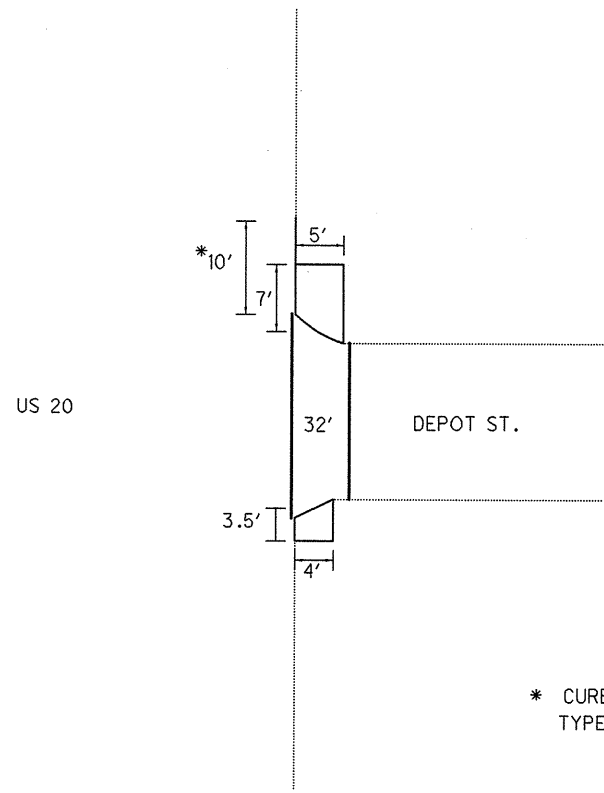
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
DEPOT ST.	609	CURB, TYPE 6	FT		10	10
VERLIN ST.	609	CURB, TYPE 6	FT		5.5	5.5
COOPER ST.	609	CURB, TYPE 6	FT		23	23
RIVER RD. (SR60)	609	CURB, TYPE 6	FT		52	52
					TOTAL	90.5

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
EDGEWATER	609	COMBINATION CURB AND GUTTER, TYPE 2	FT		38	38
					TOTAL	38

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 10.

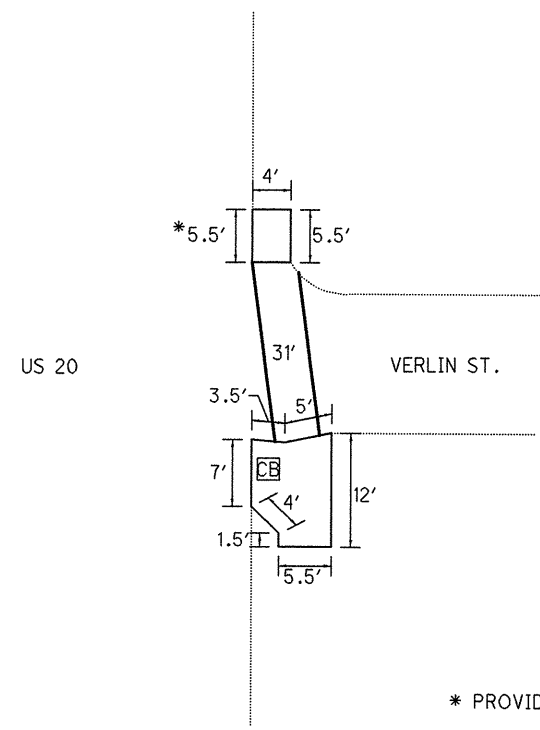
DESIGN FILE: I:\projects\77284\77284GM001.dgn
 WORKSTATION: mrobins1 DATE: 10/9/2007

NOTE:
NO WORK SHALL BE
PERFORMED OUTSIDE
OF THE RIGHT OF WAY.



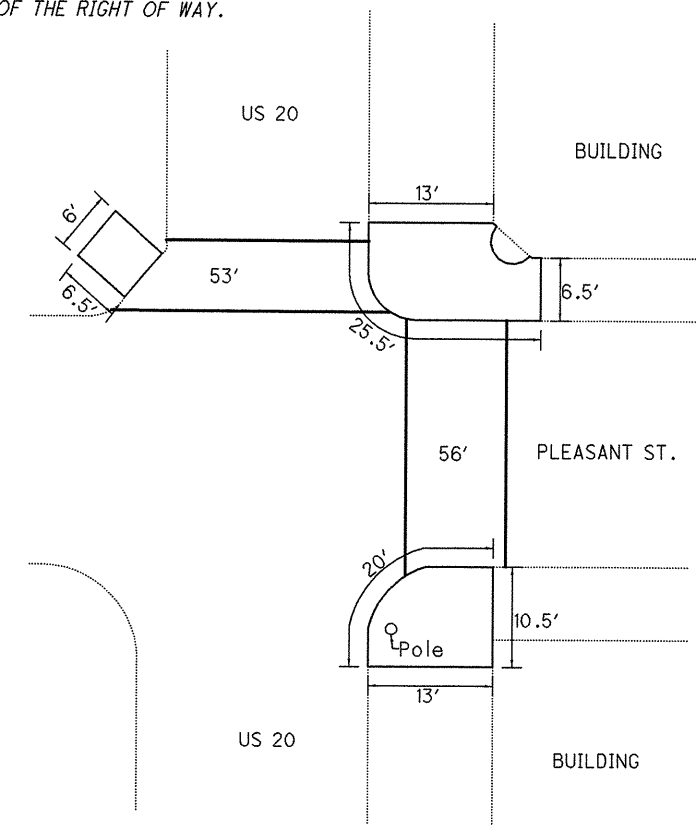
* CURB REMOVED AND CURB,
TYPE 6 PROVIDED

NOTE:
NO WORK SHALL BE
PERFORMED OUTSIDE
OF THE RIGHT OF WAY.

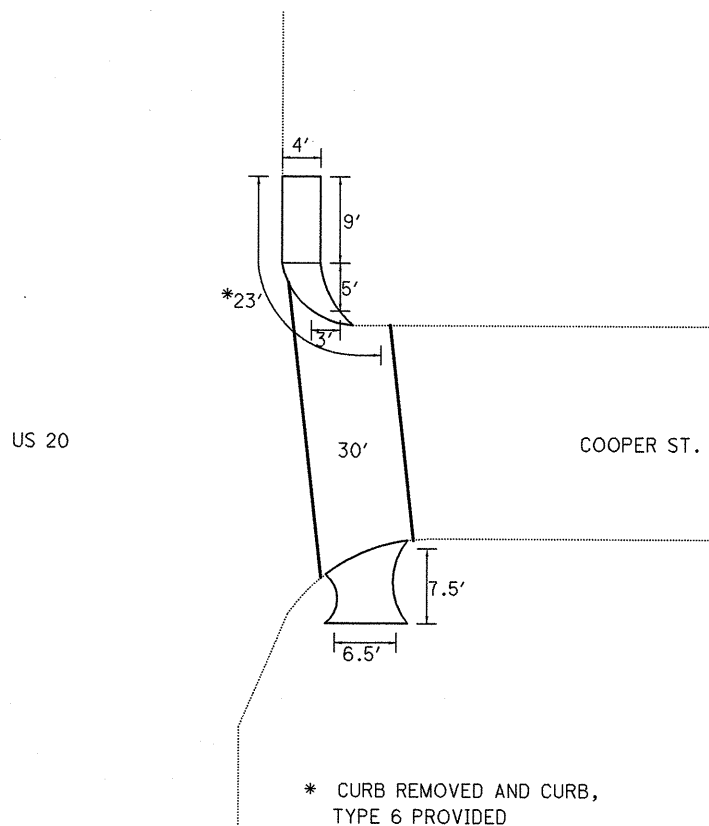


* PROVIDE CURB, TYPE 6

NOTE:
NO WORK SHALL BE
PERFORMED OUTSIDE
OF THE RIGHT OF WAY.

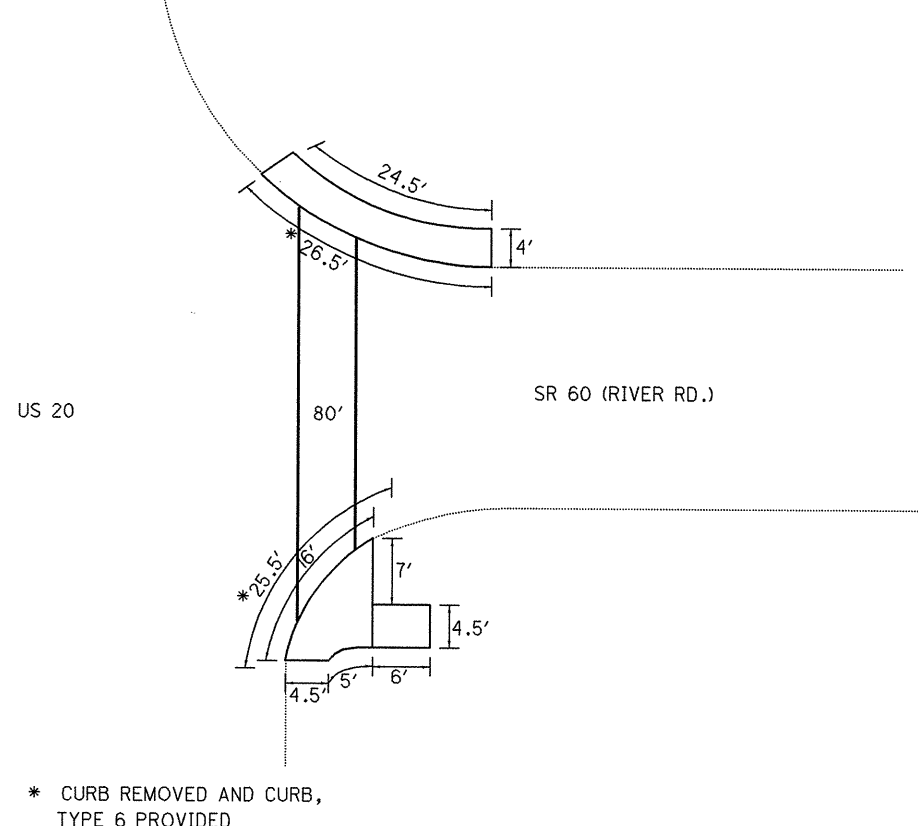


NOTE:
NO WORK SHALL BE
PERFORMED OUTSIDE
OF THE RIGHT OF WAY.



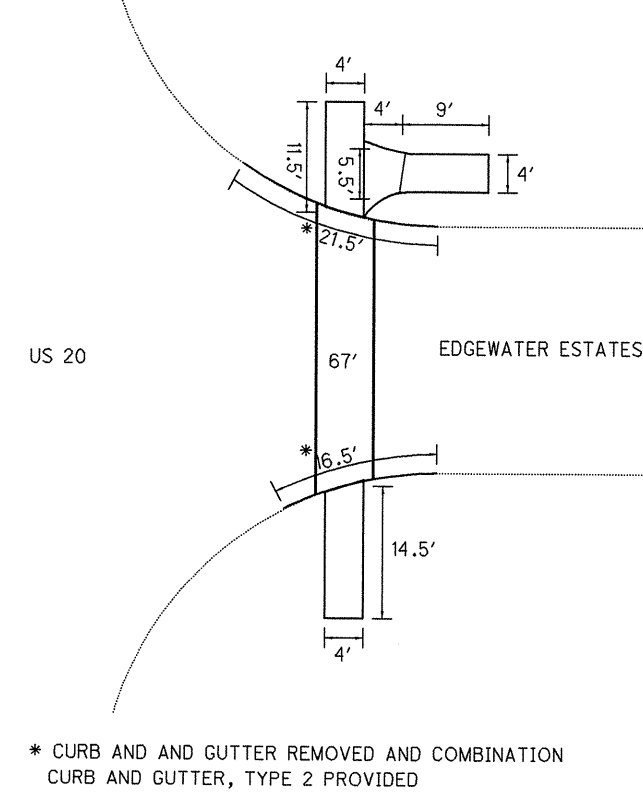
* CURB REMOVED AND CURB,
TYPE 6 PROVIDED

NOTE:
NO WORK SHALL BE
PERFORMED OUTSIDE
OF THE RIGHT OF WAY.

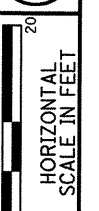


* CURB REMOVED AND CURB,
TYPE 6 PROVIDED

NOTE:
NO WORK SHALL BE
PERFORMED OUTSIDE
OF THE RIGHT OF WAY.



* CURB AND GUTTER REMOVED AND COMBINATION
CURB AND GUTTER, TYPE 2 PROVIDED



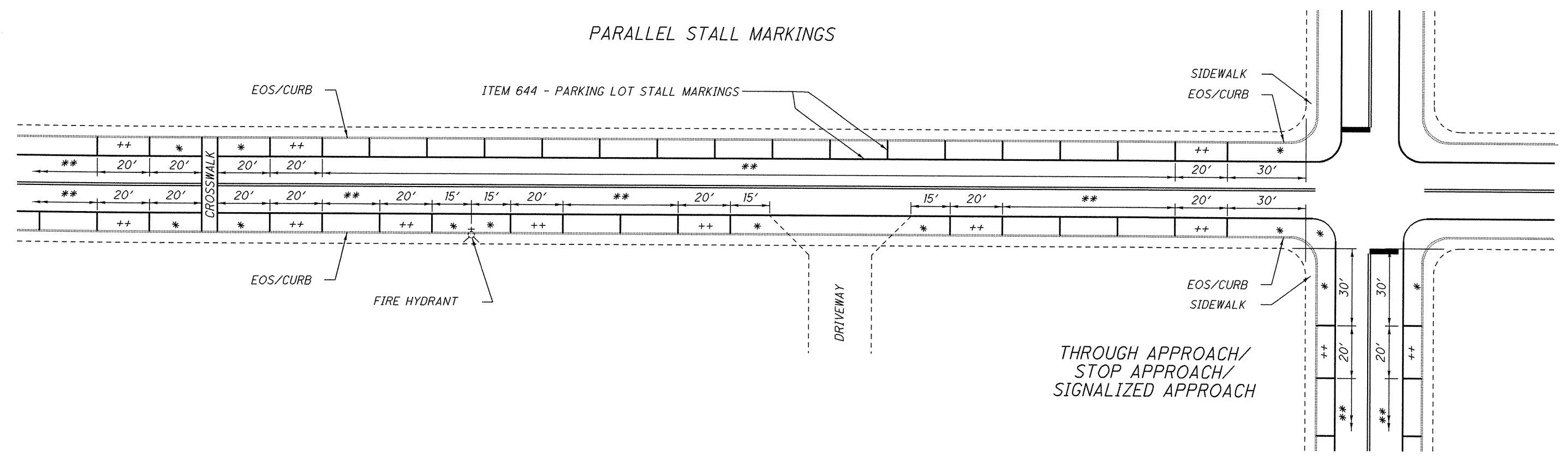
CALCULATED
MER
CHECKED
BAD

CURB RAMPS WITH TRUNCATED DOMES

HUR-20-16.35
LOR-20-0.00

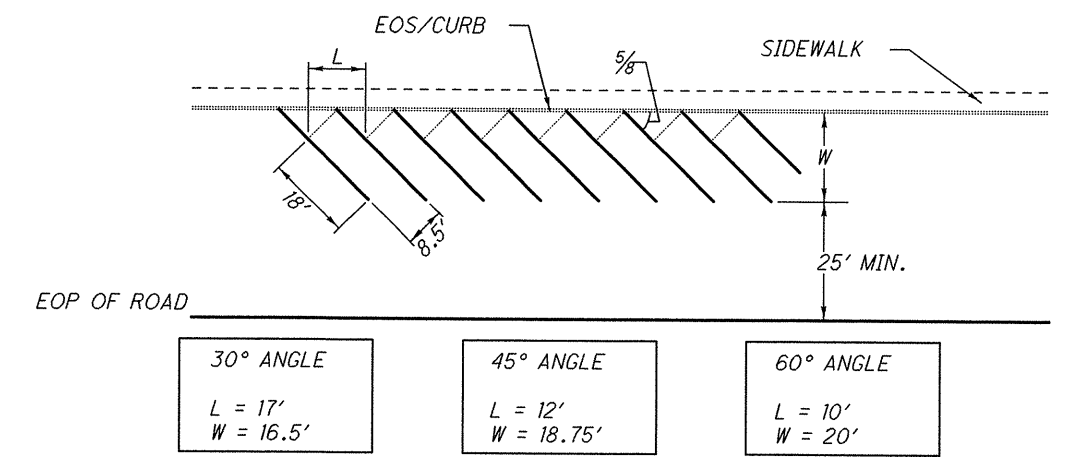
DESIGN FILE: I:\projects\77284\77284GM001.dgn
WORKSTATION: mrobins1 DATE: 10/9/2007

PARALLEL STALL MARKINGS

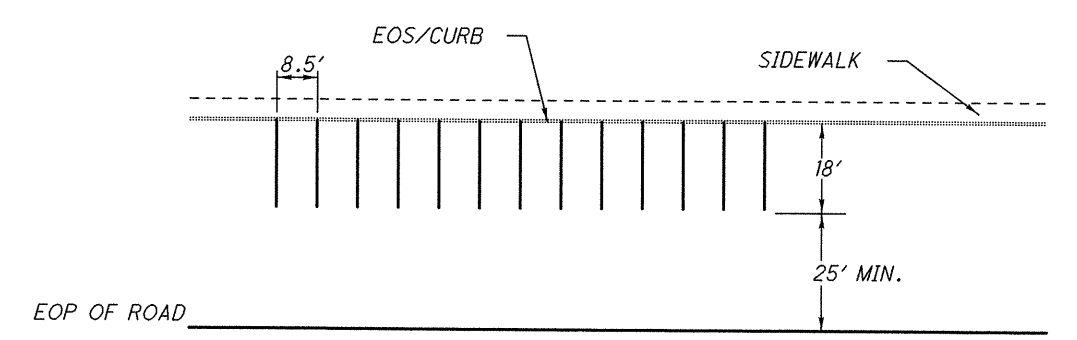


THROUGH APPROACH/
STOP APPROACH/
SIGNALIZED APPROACH

ANGLE STALL MARKINGS



PERPENDICULAR STALL MARKINGS

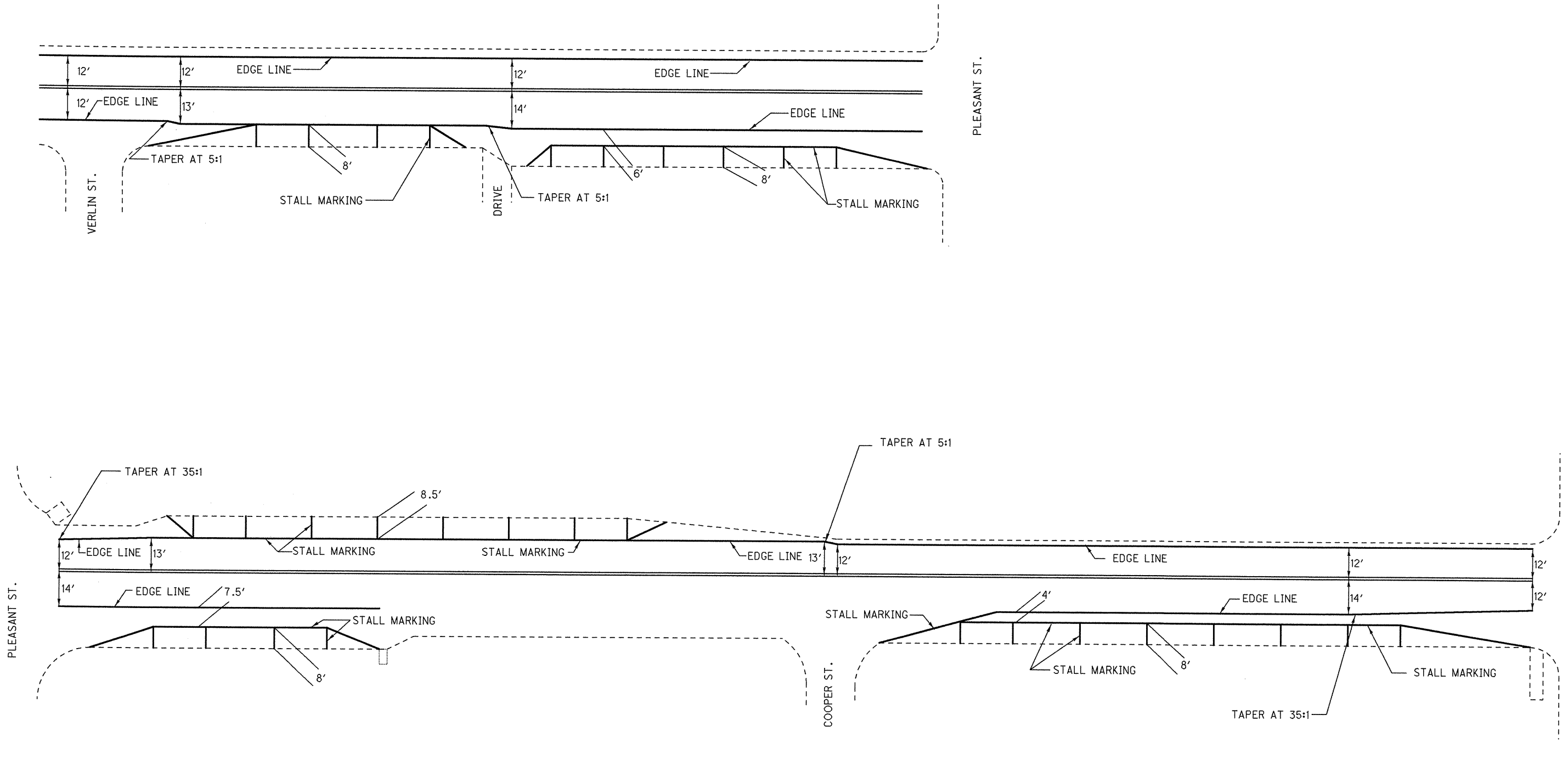


NOTES

- 1) * - NO PARKING ZONE (PAINTED YELLOW CURB BY CITY OR VILLAGE), DIMENSIONS SHOWN DEFINES THE MINIMUM DISTANCE.
- 2) PARKING LOT STALL WIDTH = 8.0', UNLESS OTHERWISE SHOWN.
- 3) ++ - END STALLS SHALL BE 20' IN LENGTH, PARALLEL STALLS ONLY.
- 4) ** - INTERIOR STALLS SHALL BE 22' TO 26' IN LENGTH, PARALLEL STALLS ONLY, WITH ALL INTERIOR STALLS BEING THE SAME LENGTH BETWEEN TWO END STALLS.
- 5) WHEN LAYING OUT THE STALLS, THE CONTRACTOR SHALL MAXIMIZE THE AMOUNT OF PARKING STALLS.
- 6) ANY DISABILITY PARKING SPACES SHALL BE DELINEATED WITH BLUE LINES INSTEAD OF WHITE LINES.
- 7) ITEM 642 - PARKING LOT STALL MARKING, TYPE 2 SHALL BE 4" WIDE.
- 8) STALLS SHALL BE 20' FROM THE NEAREST EDGE OF A ALLEY.
- 9) ALL "NO PARKING ZONES" SHOWN ABOVE APPLY TO THE ALTERNATIVE ON STREET PARKING SHOWN ON THIS SHEET.

PAYMENT FOR THE LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM THE WORK WHICH INCLUDES LAYING OUT THE PARKING SPACES AS WELL AS THE NO PARKING ZONES SHALL BE INCLUDED IN THE COST OF ITEM 642 - PARKING LOT STALL MARKING, TYPE 2. THE DEPARTMENT WILL NOT PAY FOR COST ASSOCIATED WITH CORRECTING IMPROPERLY LOCATED LINES OR REPLACING UNSATISFACTORY PAVEMENT MARKINGS.

QUANTITIES CARRIED TO PAVEMENT MARKING SHEET 31



CALCULATED
MER
CHECKED
BAD

STANDARD PARKING LOT STALL & PAVEMENT MARKINGS

HUR-20-16.35
HUR-20-16.35

AUXILIARY & LONG LINE MARKINGS

PARTICIPATION	ROUTE	COUNTY	STATION / SLM		HIGHWAY MILES	614				642, TYPE 1					644												SPECIAL													
						WORK ZONE LANE LINE, CLASS 1, 642 PAINT	WORK ZONE CENTER LINE, CLASS 1, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	EDGE LINE		CENTER LINE			AUXILIARY MARKINGS (740.04)																									
										TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)	LANE LINE	SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)	8" CHANNELIZING LINE	24" STOP LINE	CROSSWALK LINE	TRANSVERSE/DIAGONAL LINE (WHITE)	TRANSVERSE/DIAGONAL LINE (YELLOW)	ISLAND MARKING	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING		PARKING LOT STALL MARKING	LANE ARROW				WORD ON PAVEMENT "ONLY"		DOTTED LINE, 4"	HANDICAP SYMBOL MARKING	AIR SPEED ZONE MARKING							
																						72 INCH	96 INCH		LEFT	RIGHT		THROUGH	COMBINATION	72 INCH				96 INCH						
FROM	TO	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	SQ FT	EACH	EACH	FT	EACH				EACH	FT	EACH	EACH													
FED/ST	US 20	HURON	16.35	16.49	0.14		0.42																																	
FED/ST	US 20	HURON	16.49	16.54	0.05		0.08																																	
CITY	US 20	HURON	16.49	16.54	0.05		0.08																																	
FED/ST	US 20	HURON	16.54	16.75	0.21		0.63																																	
FED/ST	US 20	HURON	16.75	16.84	0.09		0.14																																	
CITY	US 20	HURON	16.75	16.84	0.09		0.14																																	
FED/ST	US 20	HURON	16.84	28.69	11.85		35.55		761								185	1,045	698				2	1,111																
FED/ST	US 20	LORAIN	0.00	6.02	6.02		18.06		231																															
ADDITIONAL LENGTH FOR SIDE ROADS													HURON	0.14																										
													LORAIN	0.05																										
CITY TOTALS																																								
FED/STATE TOTALS																																								
			TOTAL	18.50			55.10		992				9.65	18.55	185	1,522	698					2	1,111																	

RAISED PAVEMENT MARKERS

ROUTE	COUNTY	STATION/SLM		DETAIL	202	621	PRISMATIC RETRO-REFLECTOR TYPES				REMARKS	DETAIL	DESCRIPTION		
					RAISED PAVEMENT MARKER REMOVED	RPM	ONE-WAY	TWO-WAY							
								WHITE	YELLOW / YELLOW	WHITE / RED				YELLOW / RED	BLUE / BLUE
FROM	TO	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH			
US 20	HURON	16.35	16.70	GAP	24	24							1	MULTILANE UNDIVIDED TYPICAL SPACING	
US 20	HURON	16.70	17.04	8	22	22							2	TAPERED ACCEL. LANE	
US 20	HURON	17.04	23.62	GAP	434	477							3	DECELERATION LANE	
US 20	HURON	25.13	27.80	GAP	176	185							4	PARALLEL ACCEL LANE	
US 20	HURON	27.80	28.69	GAP	59	59							5	MULTILANE DIVIDED/EXPRESSWAY	
													6	STOP APPROACH	
													7	2 LANE APPR. WITH TURN LANE	
													8	THROUGH APPROACH	
													9	3 LANE APPR. WITH TURN LANE	
US 20	LORAIN	0.00	0.41	15	57	57							10	3 LANE DIVIDED TO 2 LANE TRANSITION	
US 20	LORAIN	0.41	1.88	GAP	97	97							11	3 LANE UNDIVIDED TO 2 LANE TRANSITION	
US 20	LORAIN	1.88	2.05	8	11	11							12	TWO LANE NARROW BRIDGE	
US 20	LORAIN	2.05	2.22	8	11	11							13	TWO WAY LEFT TURN LANE	
US 20	LORAIN	2.22	6.02	GAP	252	254							14	ONE LANE BRIDGE	
													15	HORIZONTAL CURVE	
													16	HORIZONTAL CURVE ALT.	
													17	STOP APPROACH ALT.	
													18	FIRE HYDRANT	
													GAP	CENTER LINE AT 80 FT. TYP.	
												<p>NOTES</p> <p>1) SEE PAVEMENT MARKING CENTER LINE LOG SUPPLIED AT THE PRECONSTRUCTION MEETING.</p> <p>2) THE LANES SHALL BE STRIPED AT 12' WIDTHS, EXCEPT AS SHOWN ON SHEET 30.</p> <p>3) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: SR 601 SR 303 SR 60 PLEASANT ST & US 20 SR 511</p> <p>4) ALL SIDE ROADS AND INTERSECTIONS SHALL BE STRIPED WITH A 20' DOUBLE SOLID YELLOW CENTER LINE.</p>			
TOTAL															

PAVEMENT MARKING / RPM SUB-SUMMARY

**HUR-20-16.35
LOR-20-0.00**

DESIGN FILE: I:\projects\77284\77284GS001.dgn
 WORKSTATION: sdeer DATE: 11/15/2007

REF NO.	SHEET NO.	STATION TO STATION		204	204	252	254	301	301	304	407	603	603	603	604	604		614		615		630	630	SPECIAL
				SUBGRADE COMPACTION	PROOF ROLLING	FULL DEPTH PAVEMENT SAWING	PAVEMENT PLANING, ASPHALT CONCRETE (1.00')	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (5.00')	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (5.00')	AGGREGATE BASE (6.00')	TACK COAT	12" CONDUIT, TYPE B	24" CONDUIT, TYPE B	27" CONDUIT, TYPE B	CATCH BASIN, NO. 2-3	MANHOLE, NO. 1	WORK ZONE EDGE LINE, CLASS 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (FLEXIBLE)	REMOVAL OF GROUND MOUNTED SIGN AND REELECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REELECTION	REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS			
				SQ YD	HOUR	FT.	SQ. YD.	CU. YD.	CU. YD.	CU. YD.	GALLON	FT	FT	FT	EACH	EACH		MILE		SQ. YD.		EACH	EACH	SQ. YD.
WESTERN RESERVE SCHOOL TURN LANE																								
M-1	32A-32D	1130+50 US 20	1149+50 US 20			1908																		
	32A-32D	1130+50 US 20	1149+50 US 20																	1433				
	34-37	1131+96 US 20	1148+02 US 20	2,273	1	1613	1,957	289	309	379	63													446
D-1	34	1131+28.09 US 20	1131+29.79 US 20											17.9										
CB-1	34	1131+29.79 US 20													1									
D-2	35	1138+69.27 US 20	1138+18.44 US 20										50.8											
D-3	36	1141+68.98 US 20	1141+25.31 US 20									43.7												
D-4	36	1146+63.13 US 20	1146+85.95 US 20									22.8												
D-5	37	1143+42.18 US 20														1								
DR-1	35	1138+44.6 US 20						29																
DR-2	36	1141+45.7 US 20						23																
S-1	36	1141+62 US 20																				1	1	
S-2	36	1143+33 US 20																				1	1	
S-3	37	1145+03 US 20																				1	1	
WESTERN RESERVE SCHOOL TURN LANE TOTALS				2,273	1	3521	1,957	650		379	63	66.5	50.8	17.9	1	1		0.76		1433		3	3	446

TOTALS CARRIED TO GENERAL SUMMARY

REF NO.	SHEET NO.	STATION TO STATION		204	204		203	252	254	301	301	304	407	442	442	442	604	617		SPECIAL
				SUBGRADE COMPACTION	PROOF ROLLING		FULL DEPTH PAVEMENT SAWING	PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE)	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (6.00')	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (3.00')	AGGREGATE BASE (6.00')	TACK COAT	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (448) (DRIVEWAYS) (1.50')	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (VARIABLE)	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448) (DRIVEWAYS) (VARIES)	CATCH BASIN RECONSTRUCTED TO GRADE	COMPACTED AGGREGATE	REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS		
				SQ YD	HOUR		FT.	SQ. YD.	CU. YD.	CU. YD.	CU. YD.	GALLON	CU. YD.	CU. YD.	CU. YD.	EACH	CU. YD.		SQ. YD.	
WAKEMAN CURVE																				
R1	58	1331+25.00 US 20	1333+75.00 US 20				262													
R2	58	1332+30.00 US 20	1339+02.00 US 20				683													
R3	59	1+50.00 MAIN ST.	1338+15.00 US 20				200													
D1	58	1333+86.22															1			
DW1	58	1332+58.70 (75 SQ YD)							33				12	3		3				
DW2	58	1334+13.49	1336+45.31 (219 SQ YD)															24		
		58-59	1331+25.00 US 20	1339+50 US 20	809	3			1938	121	95	131	42		3					318
WAKEMAN CURVE TOTALS				809	3		1145	1971	216		131	54	3	3	3	1	24			318

TOTALS CARRIED TO GENERAL SUMMARY

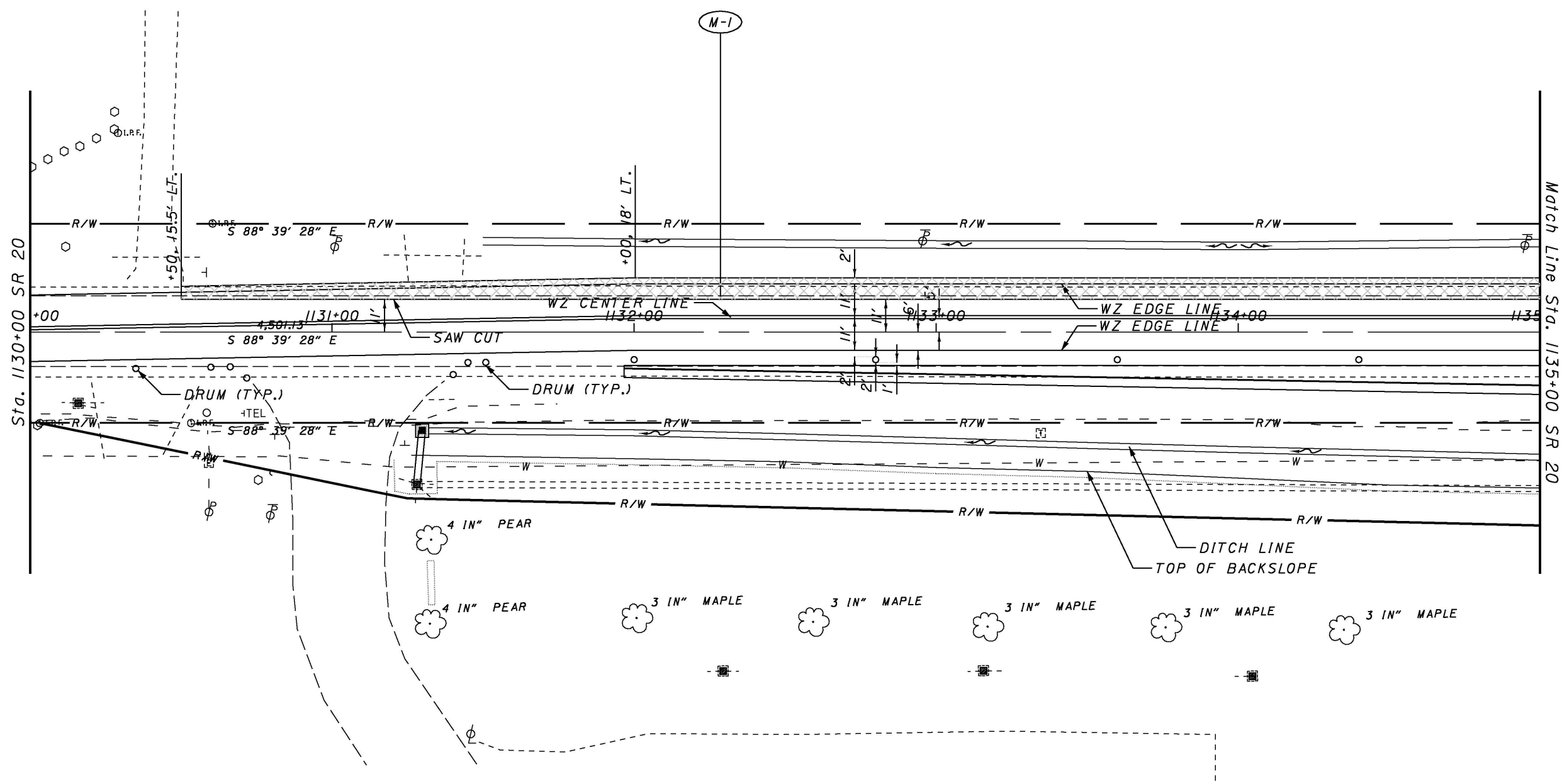
NOTE: MAIN ST. QUANTITIES ARE INCLUDED INTO THE US 20 PAVEMENT QUANTITIES.

ROADWAY SUBSUMMARY
 WESTERN RESERVE SCHOOL TURN LANE & WAKEMAN CURVE
 HUR-20-16.35
 LOR-20-0.00
 CALCULATED SJD CHECKED BAD
 32
 107

I:\projects\77284\77284MPI00_bld.dgn
 11/15/2007
 2:25:09 PM

CALCULATED
 SJD
 CHECKED
 MJS

0 10 20 40
 HORIZONTAL
 SCALE IN FEET



NOTE: THE WORK ZONE MARKINGS TRANSITION TO SHIFT TRAFFIC ONTO THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL HAVE A 55:1 RATE.

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

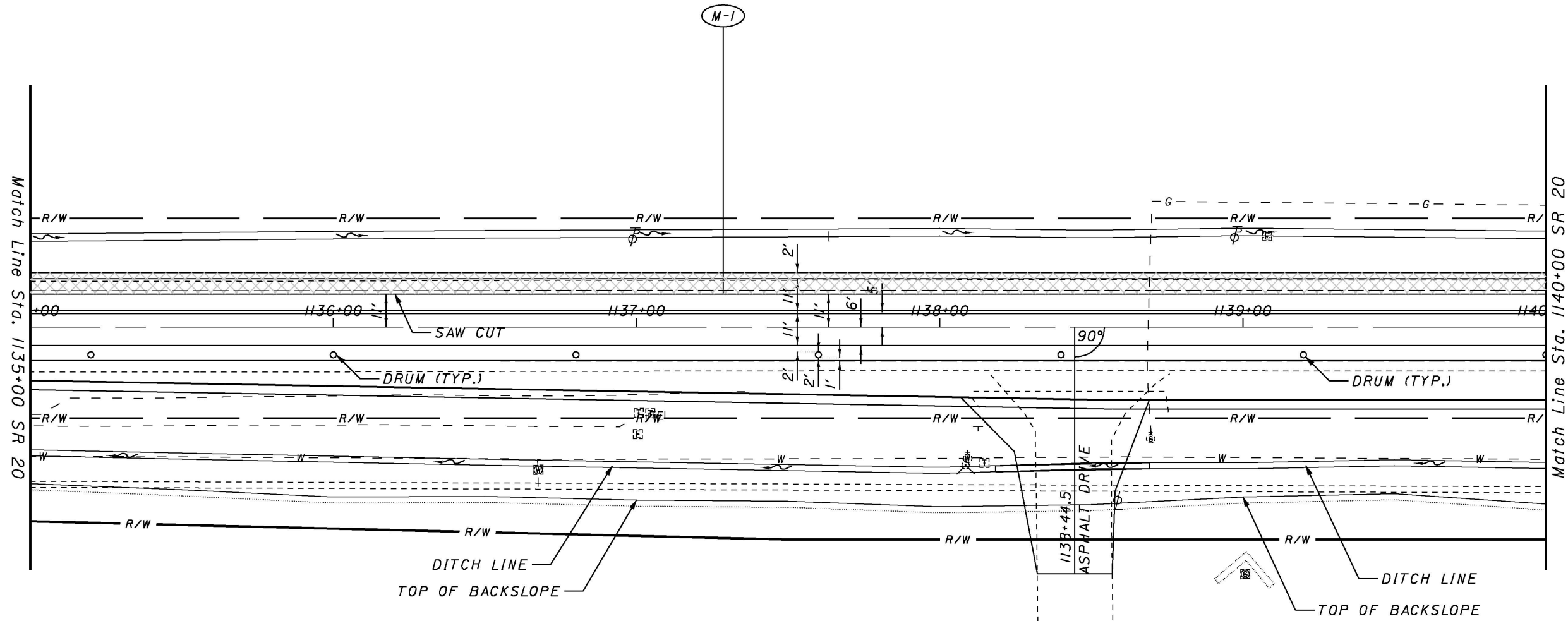
MAINTENANCE OF TRAFFIC
STA. 1130+00 - STA. 1135+00


HUR-20-16.35
LOR-20-0.00

32A
 107

REVISED: 11/15/07

I:\projects\77284\77284MPI00_b2.dgn
 DATE: 11/15/2007



 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

CALCULATED: SJD
 CHECKED: MJS

0 10 20 40
 HORIZONTAL SCALE IN FEET

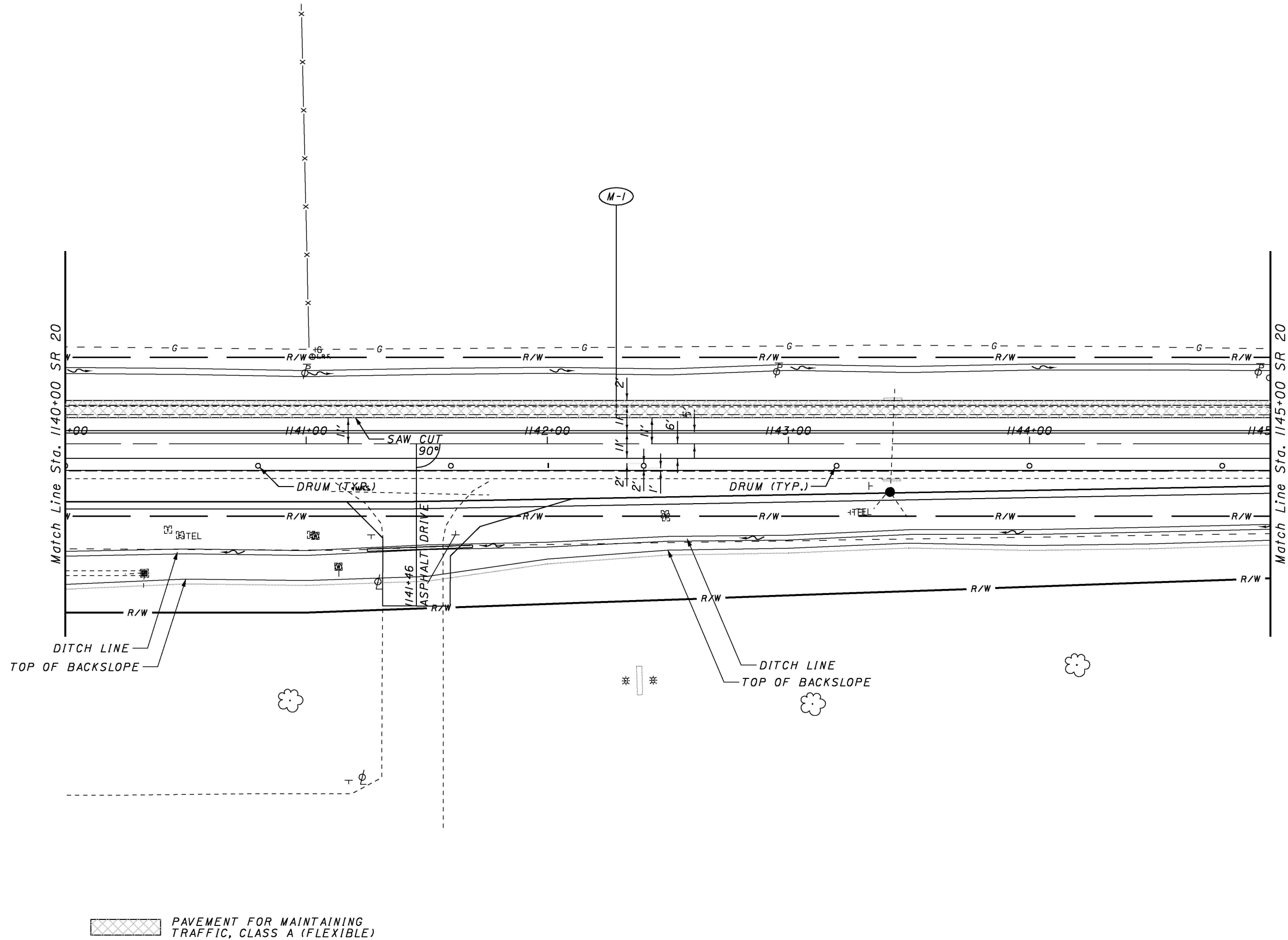


**MAINTENANCE OF TRAFFIC
 STA. 1135+00 - STA. 1140+00**

**HUR-20-16.35
 LOR-20-0.00**

32B
 107

I:\projects\77284\77284MPI00_b3.dgn
 11/15/2007



PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

CALCULATED
 SJD
 CHECKED
 MJS

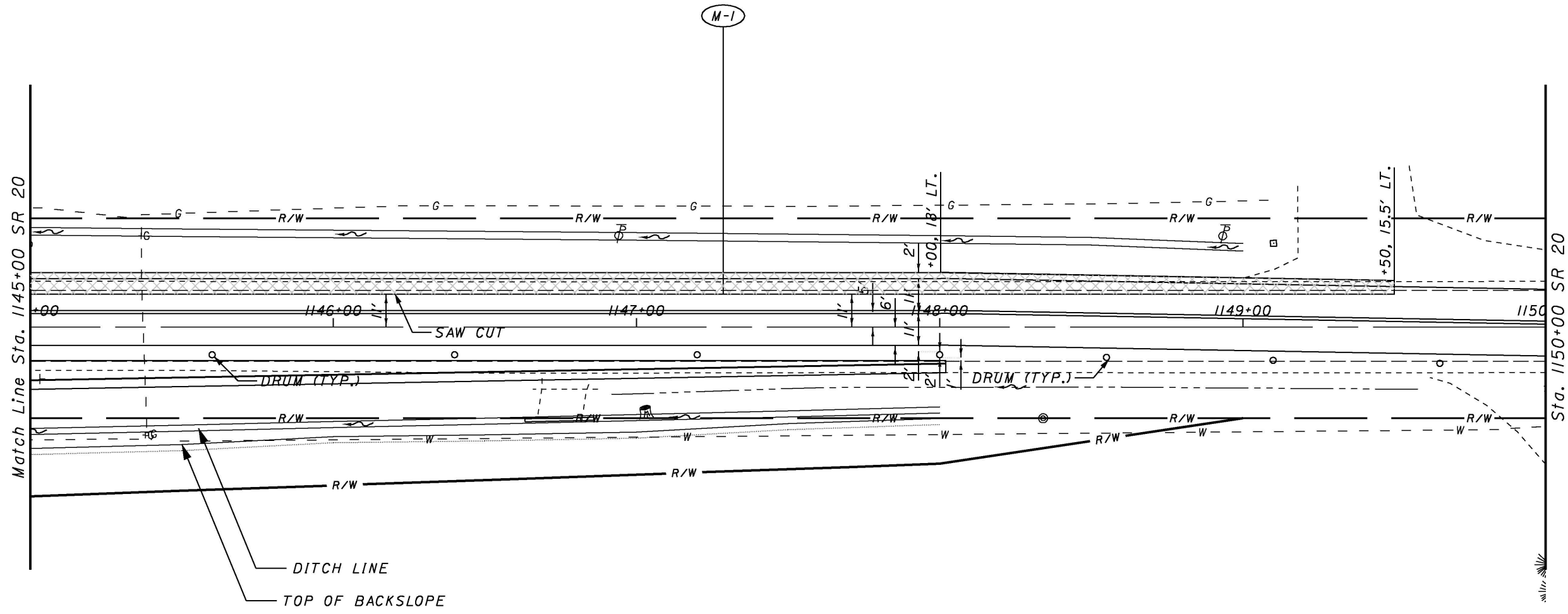
0 10 20 40
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC
 STA. 1140+00 - STA. 1145+00**

**HUR-20-16.35
 LOR-20-0.00**

32C
 107

I:\projects\77284\77284MPI00_b4.dgn
 DATE: 11/15/2007



NOTE: THE WORK ZONE MARKINGS TRANSITION TO SHIFT TRAFFIC ONTO THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL HAVE A 55:1 RATE.

 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

CALCULATED
SJD
CHECKED
MJS

0 10 20 40
HORIZONTAL SCALE IN FEET

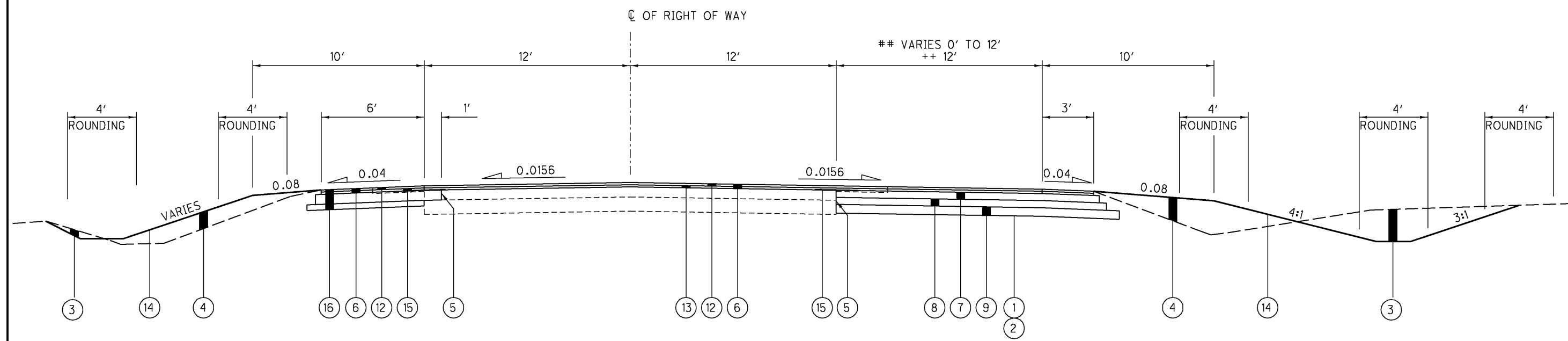


**MAINTENANCE OF TRAFFIC
 STA. 1145+00 - STA 1149+00**

**HUR-20-16.35
 LOR-20-0.00**

32D
107

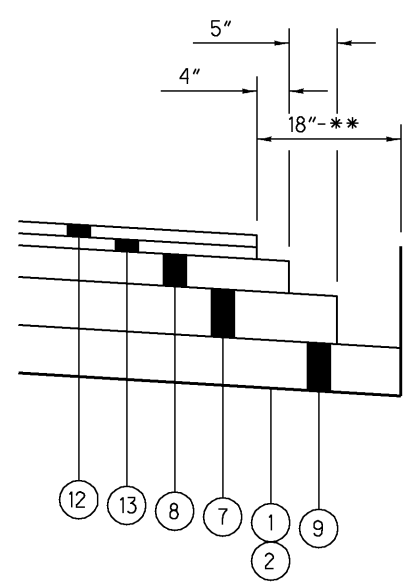
REVISED: 11/15/07



STA 1131+96.65 TO STA. 1138+57.00
 ++ STA 1138+57.00 TO STA. 1141+42.00
 ## STA 1141+42.00 TO STA. 1148+02.00

TYPICAL 7

** - EXCAVATION, PROOF ROLLING, AND SUBGRADE COMPACTION SHALL EXTEND 18" BEYOND THE EDGE OF THE PROPOSED ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) AS STATED IN CMS 204.03.



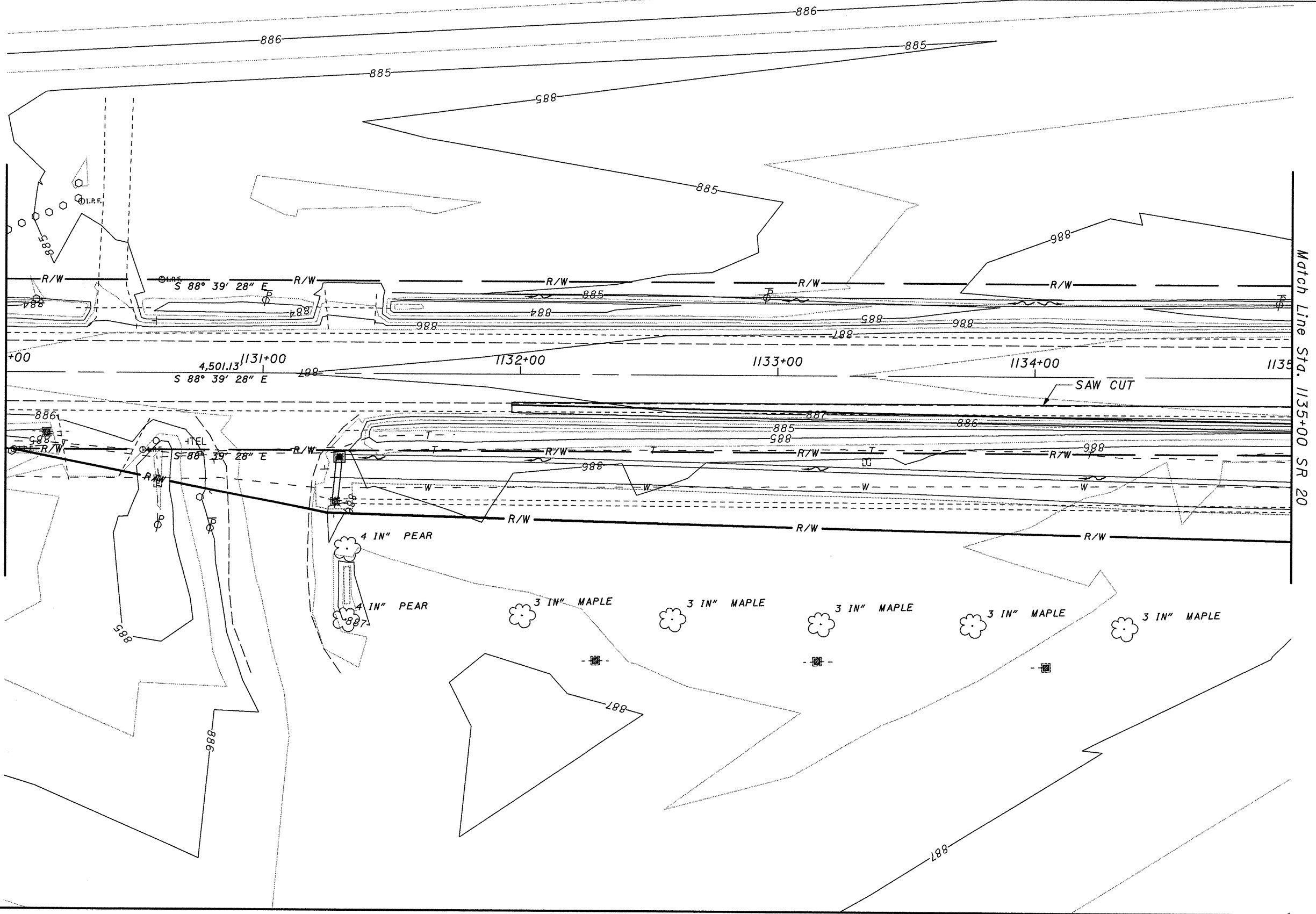
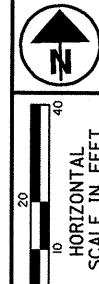
LEGEND

- | | |
|--|---|
| ① ITEM 204 - SUBGRADE COMPACTION | ⑨ ITEM 304 - AGGREGATE BASE (6.00") |
| ② ITEM 204 - PROOF ROLLING | ⑩ ITEM 407 - TACK COAT |
| ③ ITEM 203 - EXCAVATION | ⑪ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE |
| ④ ITEM 203 - EMBANKMENT | ⑫ ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (1.50") |
| ⑤ ITEM 252 - FULL DEPTH PAVEMENT SAWING | ⑬ ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (VARIES) |
| ⑥ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE) | ⑭ ITEM 659 - SEEDING AND MULCHING |
| ⑦ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (5.00") | ⑮ ITEM 690 - SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS |
| ⑧ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (5.00") | ⑯ ITEM 615 - TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (FLEXIBLE) |

DESIGN FILE: I:\projects\77284\77284GY004.dgn
 WORKSTATION: sdeer DATE: 11/15/2007

I:\projects\7284\7284DBI00.bl.dgn
 DWG: 10/12/2007
 mshelton

PROJECT DATA	
TOTAL AREA (RIGHT OF WAY)	4.42 ACRES
PROJECT EARTH DISTURBED AREA	1.79 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.56 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	4.90 ACRES
IMPERVIOUS AREA FOR PRE-CONSTRUCTION SITE	1.49 ACRES
IMPERVIOUS AREA FOR POST CONSTRUCTION SITE	1.87 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.63
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.67
SOIL AND WATER CONSERVATION MAP	14
IMMEDIATE RECEIVING WATERS	CHAPPEL CREEK
SUBSEQUENT RECEIVING WATERS	LAKE ERIE



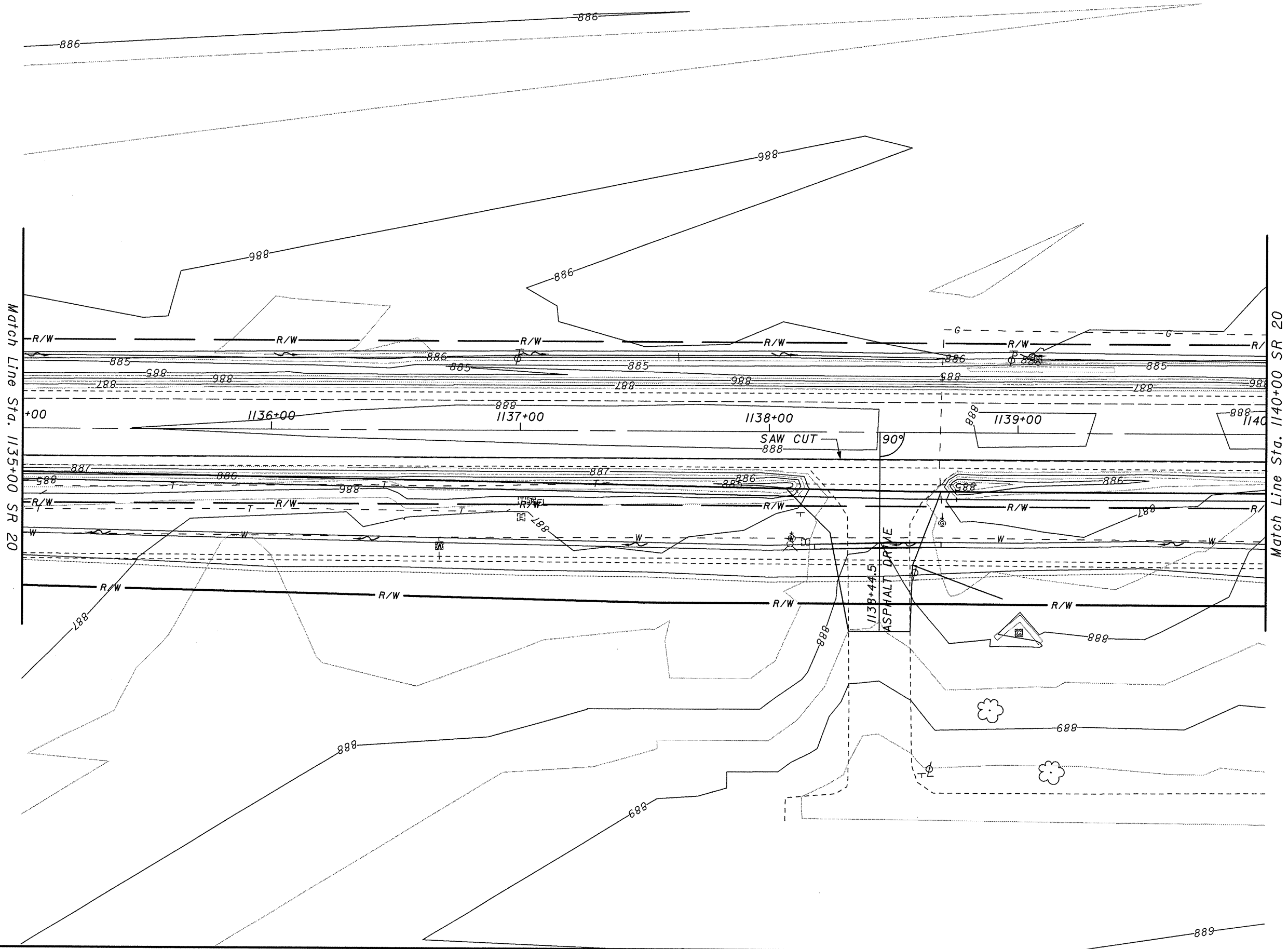
CALCULATED	SJD	CHECKED	BAD
------------	-----	---------	-----

SITE PLAN
STA. 1130+00 - STA. 1135+00

HUR-20-16.35
LOR-20-0.00

33A
 107

I:\projects\77284\77284DBI00_b2.dgn
DATE: 10/19/2007
DRAWN BY: [signature]



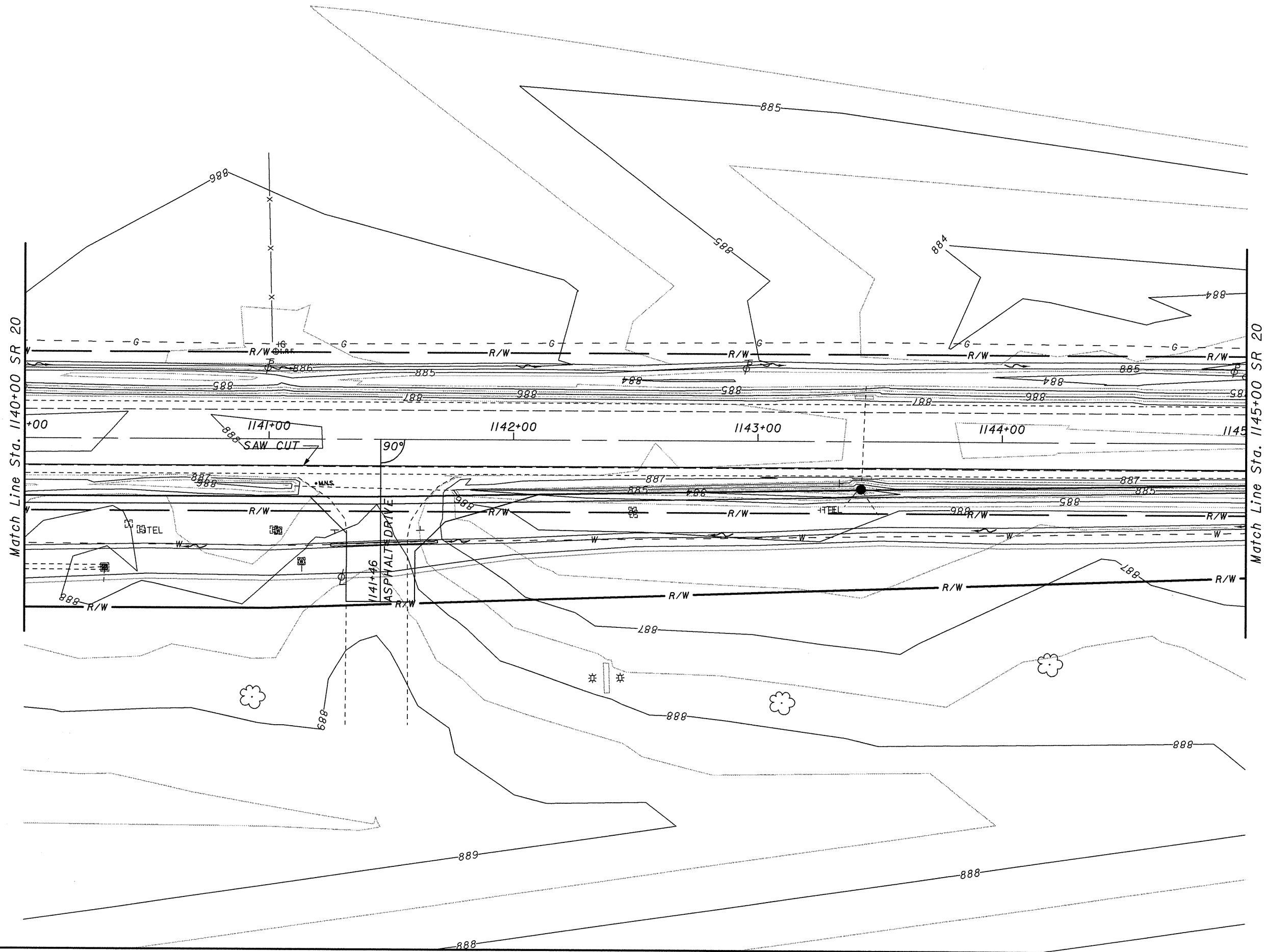
CALCULATED	SJD
CHECKED	BAD

HORIZONTAL SCALE IN FEET
0 10 20 40

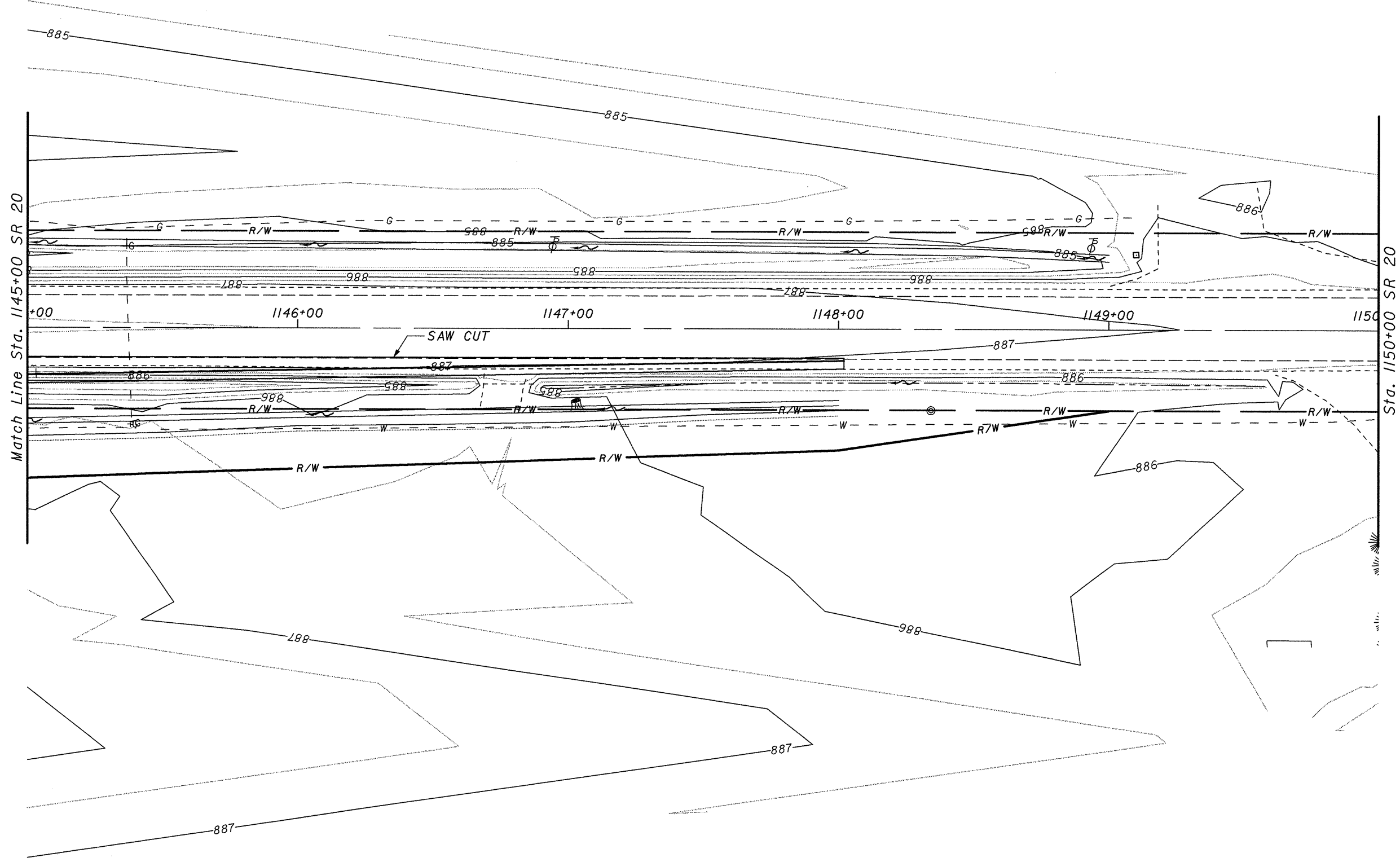
SITE PLAN
STA. 1135+00 - STA. 1140+00

HUR-20-16.35
LOR-20-0.00

33B
107



i:\projects\77284\77284DBI00.b4.dgn
DATE: 10/19/2007

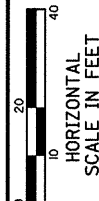


33D
107

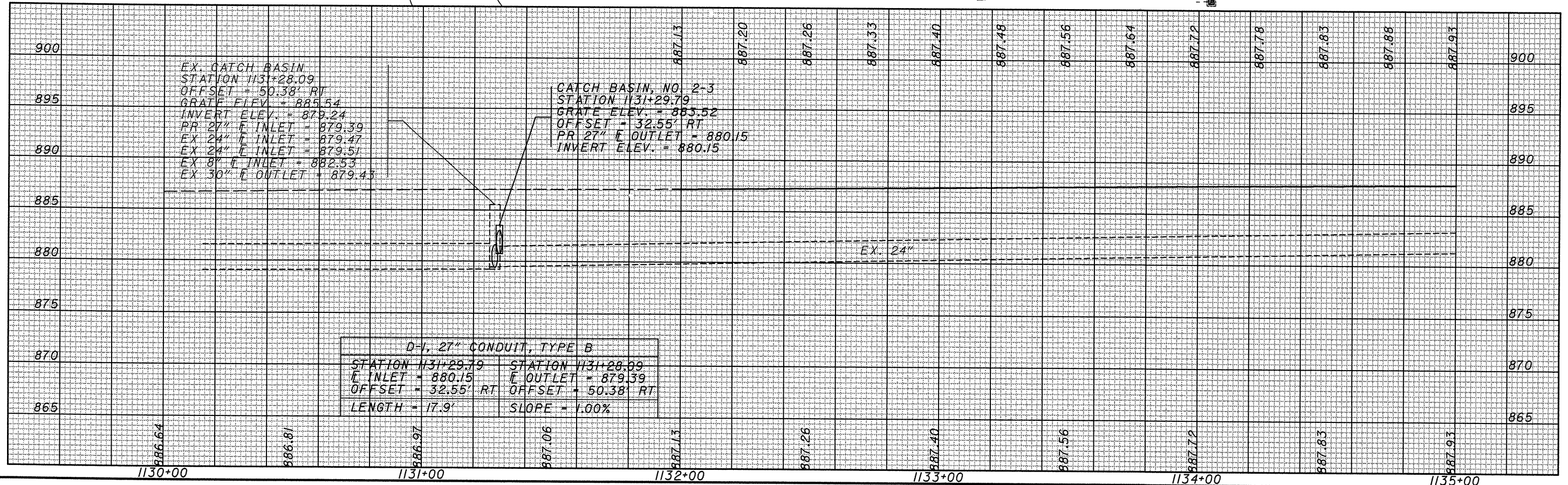
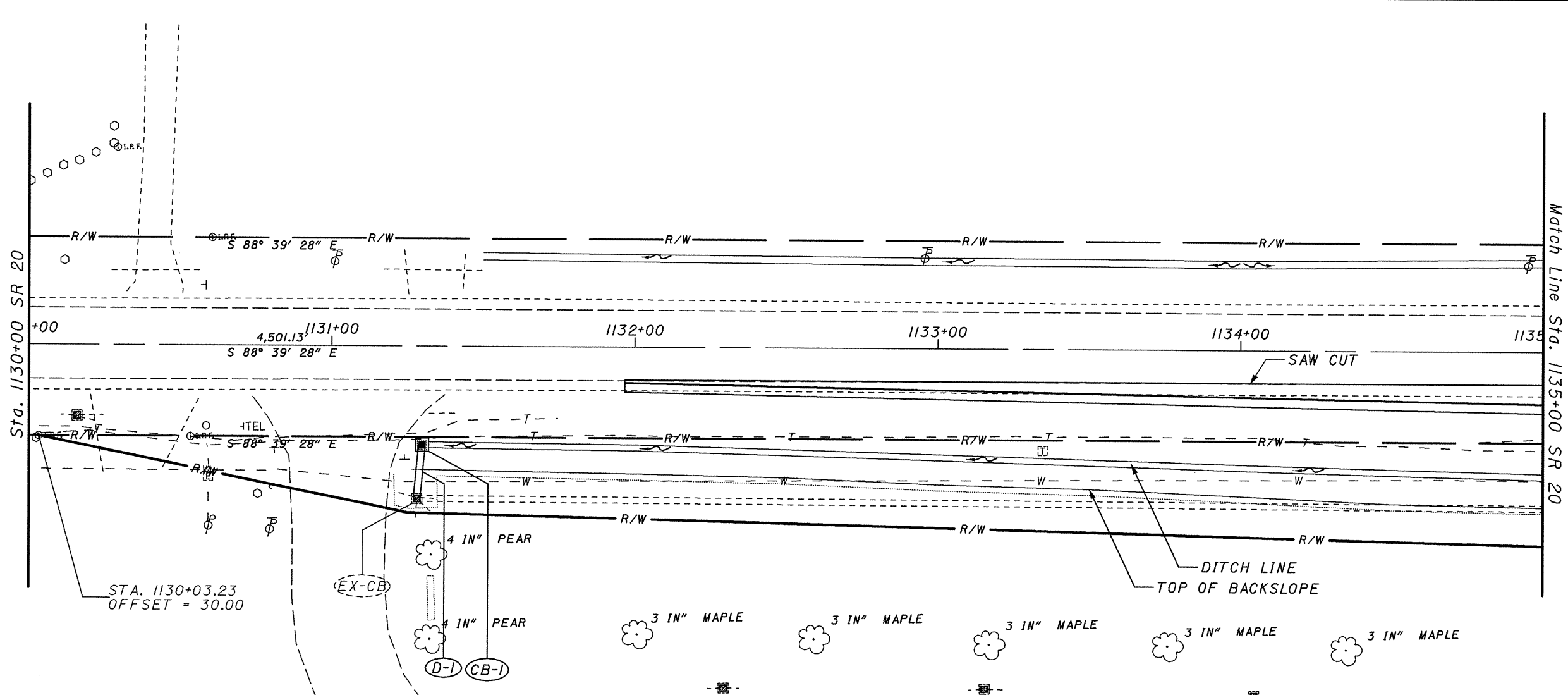
HUR-20-16.35
LOR-20-0.00


SITE PLAN
STA. 1145+00 - STA 1149+00

CALCULATED
SJD
CHECKED
BAD



I:\projects\7284\7284GPI00_bldg.dgn
 DWG: 10/10/2007
 1408 USJADJ01





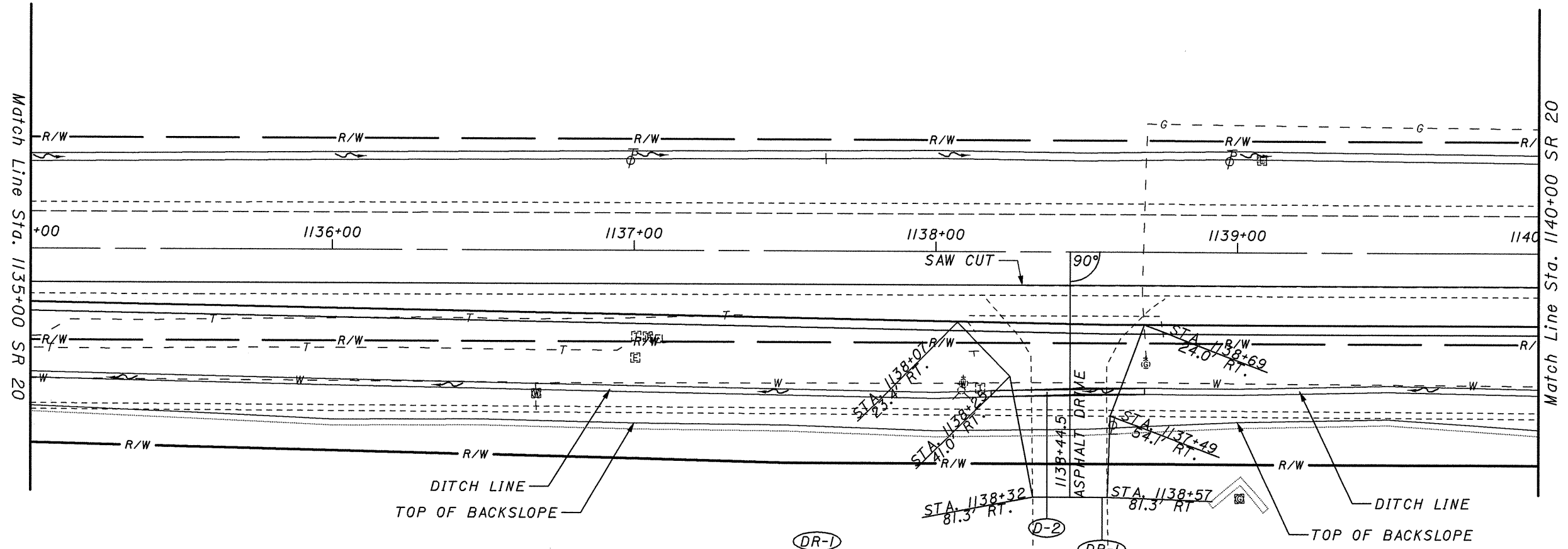
HORIZONTAL SCALE IN FEET
 0 10 20

CALCULATED SJD
 CHECKED MJS

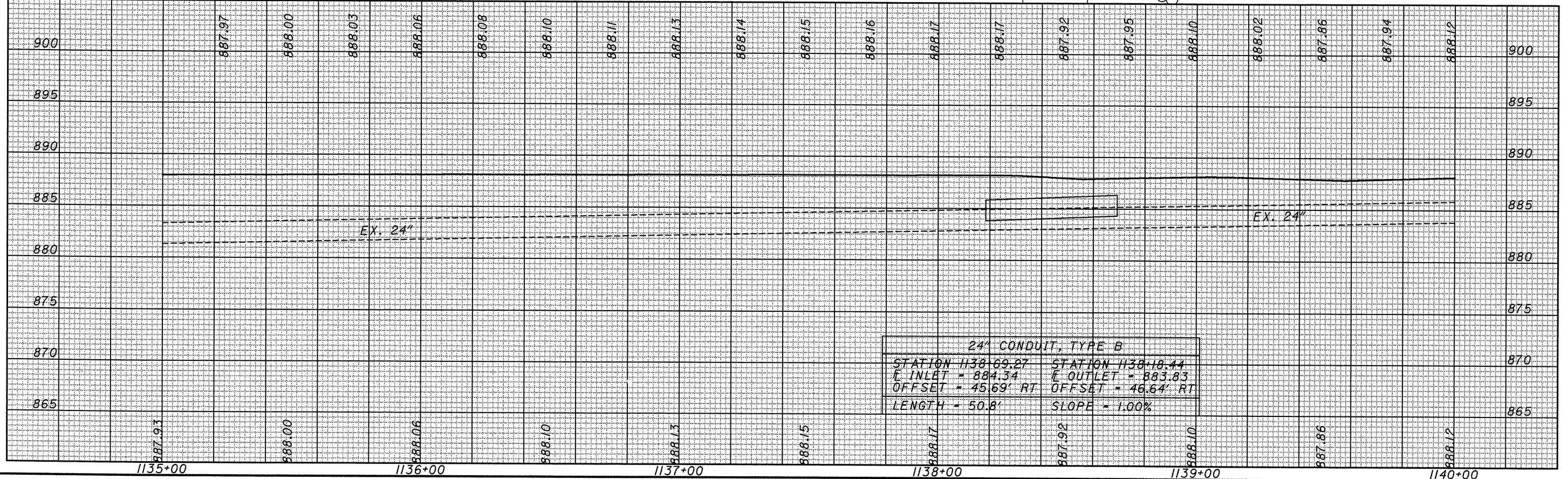
PLAN AND PROFILE
STA. 1130+00 - STA. 1135+00

HUR-20-16.35
LOR-20-0.00

34
 107



(DR-1)
EXCAVATION INCLUDED ON THE
CROSS SECTION SHEETS.
SURFACE COURSE INCLUDED
ON THE PAVEMENT DATA SHEET.

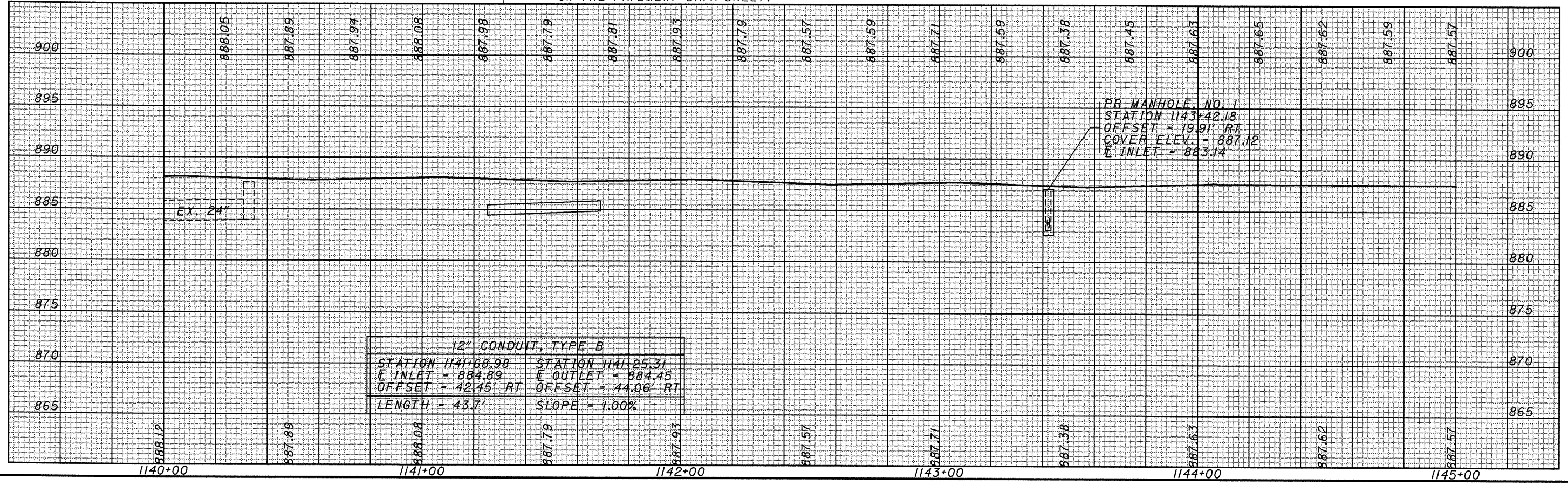
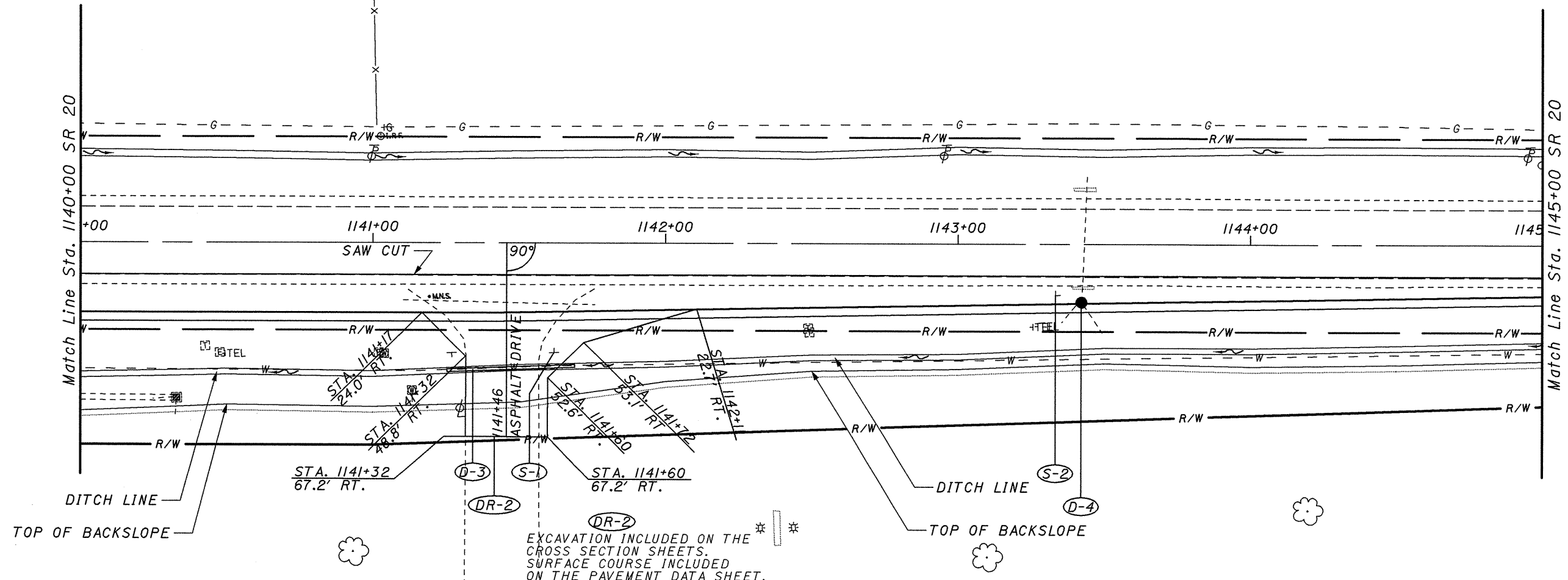



CALCULATED S.J.D.
CHECKED M.J.S.

PLAN AND PROFILE
STA. 1135+00 - STA. 1140+00

HUR-20-16.35
LOR-20-0.00

DESIGNER: I:\projects\7284\7284CPI00_b3.dgn
 DATE: 10/10/2007
 WORKSTATION: mshad





0 20 40
HORIZONTAL SCALE IN FEET

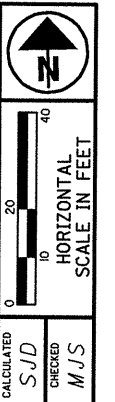
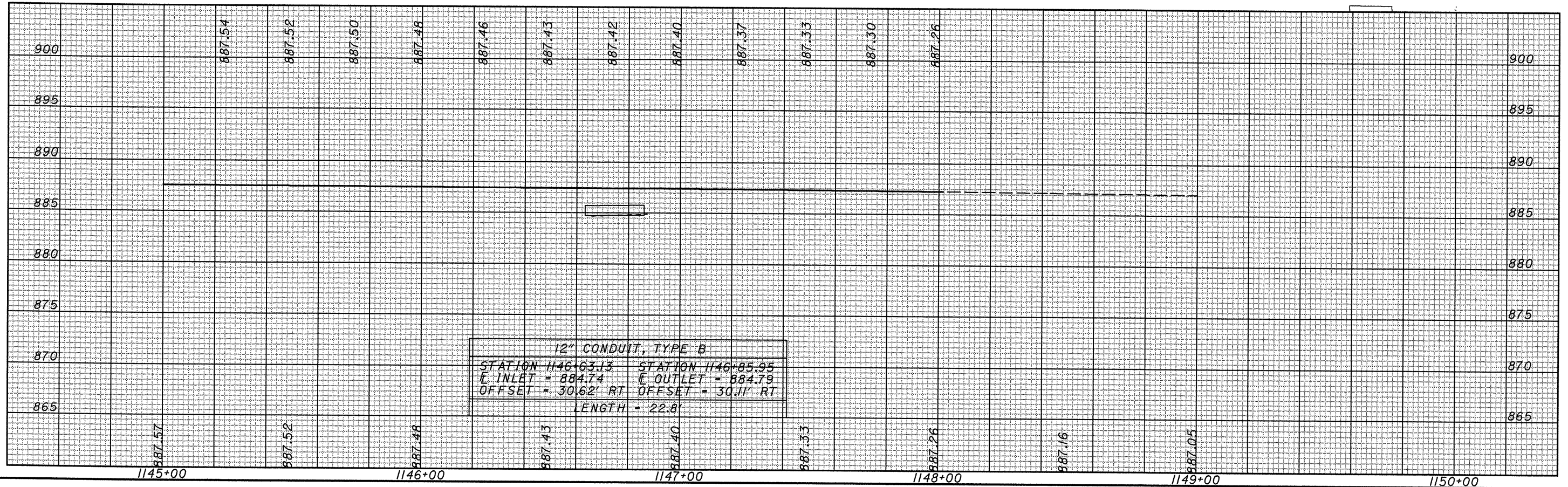
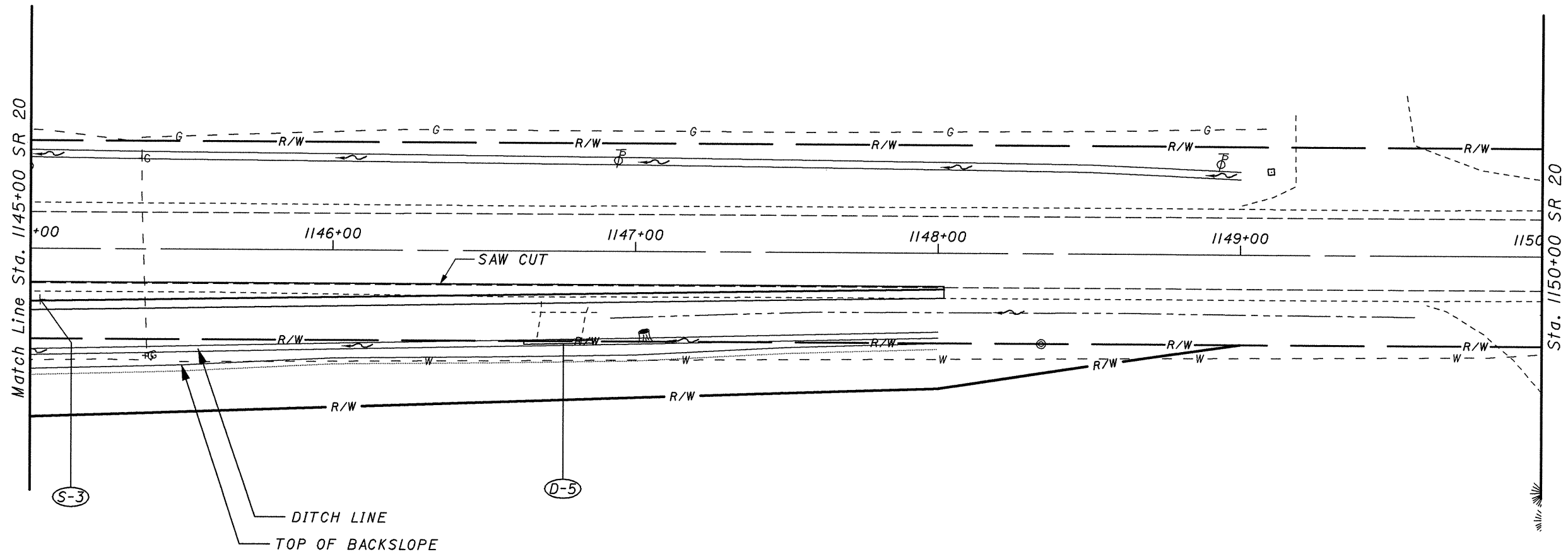
CALCULATED SJD
CHECKED MJS

PLAN AND PROFILE
STA. 1140+00 - STA. 1145+00

HUR-20-16.35
LOR-20-0.00

36
107

I:\projects\7284\7284GPI00_b4.dgn
 DATE: 10/10/2007
 DWG: 10/10/2007

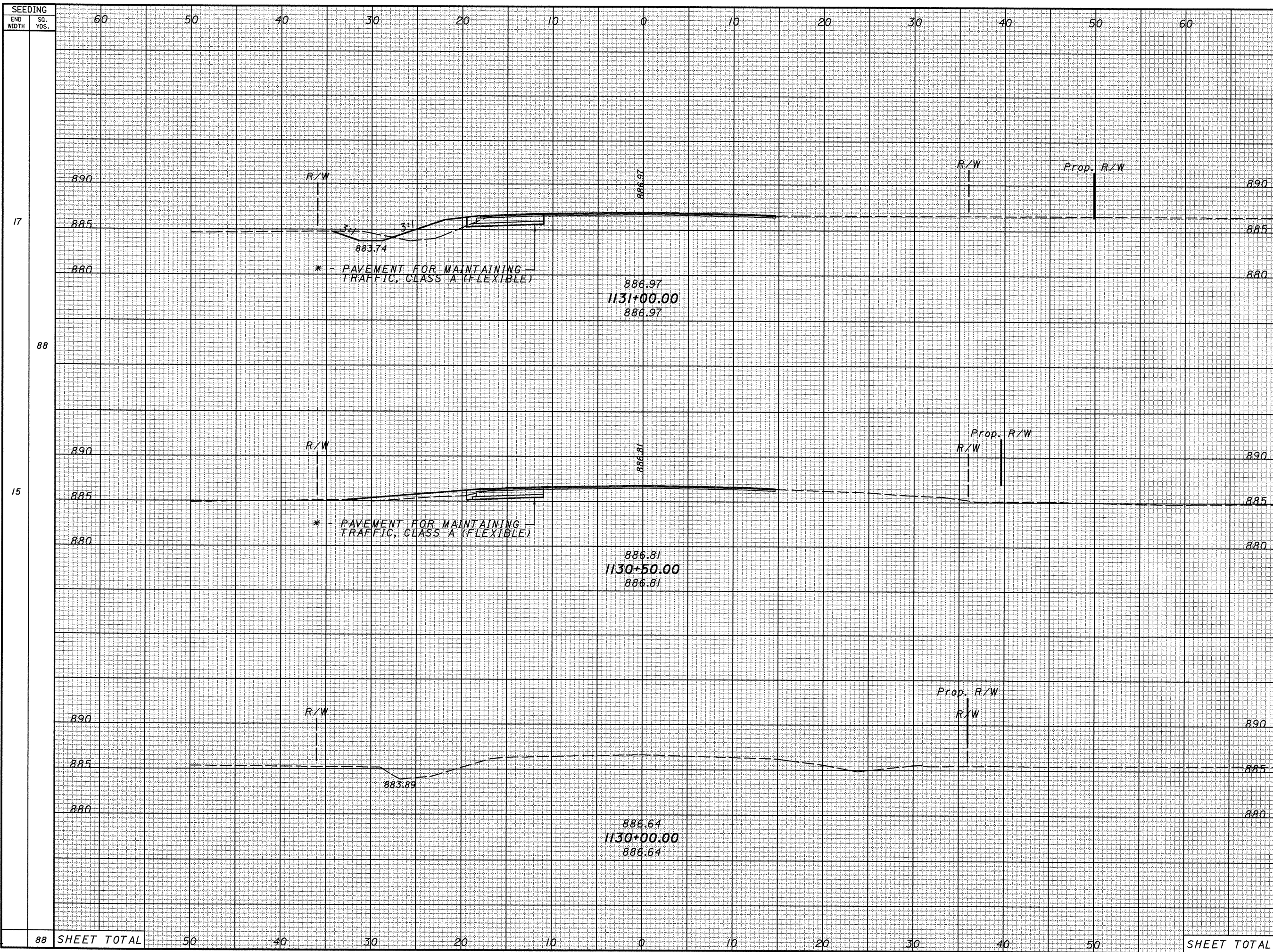


CALCULATED SJD
 CHECKED MJS

PLAN AND PROFILE
STA. 1145+00 - STA 1149+00

HUR-20-16.35
LOR-20-0.00

DESIGN DATE: 10/19/2007
 WORKSHEET NO: 101



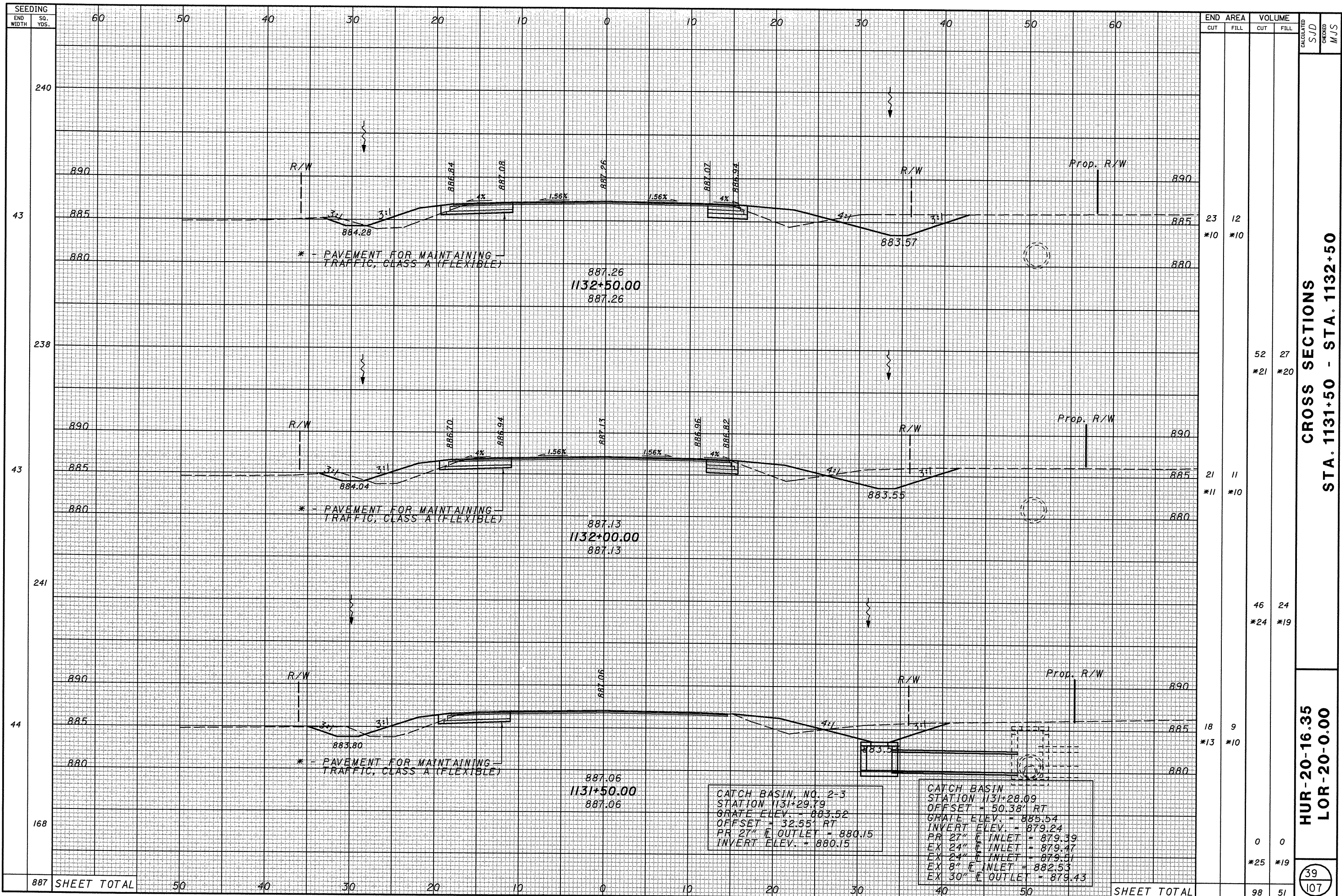
END WIDTH	SEEDING SO. YDS.	END AREA		VOLUME																	
		CUT	FILL	CUT	FILL																
60																					
50																					
40																					
30																					
20																					
10																					
0																					
10																					
20																					
30																					
40																					
50																					
60																					
88 SHEET TOTAL		50	40	30	20	10	0	10	20	30	40	50	SHEET TOTAL	*12	*10	*20	*14	*9	*5	*8	*5

CROSS SECTIONS
 STA. 1130+00 - STA. 1131+00

HUR-20-16.35
 LOR-20-0.00

38
 107

I:\projects\77284\77284XS100.B.dgn
 DATE: 10/10/2007
 DWGNO: 77284XS100
 SHEET: 107



SEEDING	END AREA		VOLUME		CALCULATED	CHECKED	MJS
	CUT	FILL	CUT	FILL			
240							
43	23	12	*10	*10			
238			52	27			
43	21	11	*11	*10			
241			46	24			
44	18	9	*13	*10			
168			0	0			
887	98	51	*25	*19			

CROSS SECTIONS
 STA. 1131+50 - STA. 1132+50

HUR-20-16.35
 LOR-20-0.00

39
 107

CATCH BASIN, NO. 2-3
 STATION 1131+29.79
 GRATE ELEV. = 883.52
 OFFSET = 32.55' RT
 PR 27" F. OUTLET = 880.15
 INVERT ELEV. = 880.15

CATCH BASIN
 STATION 1131+28.09
 OFFSET = 50.38' RT
 GRATE ELEV. = 885.54
 INVERT ELEV. = 879.24
 PR 27" F. INLET = 879.39
 EX 24" F. INLET = 879.47
 EX 24" F. INLET = 879.51
 EX 8" F. INLET = 882.53
 EX 30" F. OUTLET = 879.43

* - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

* - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

* - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

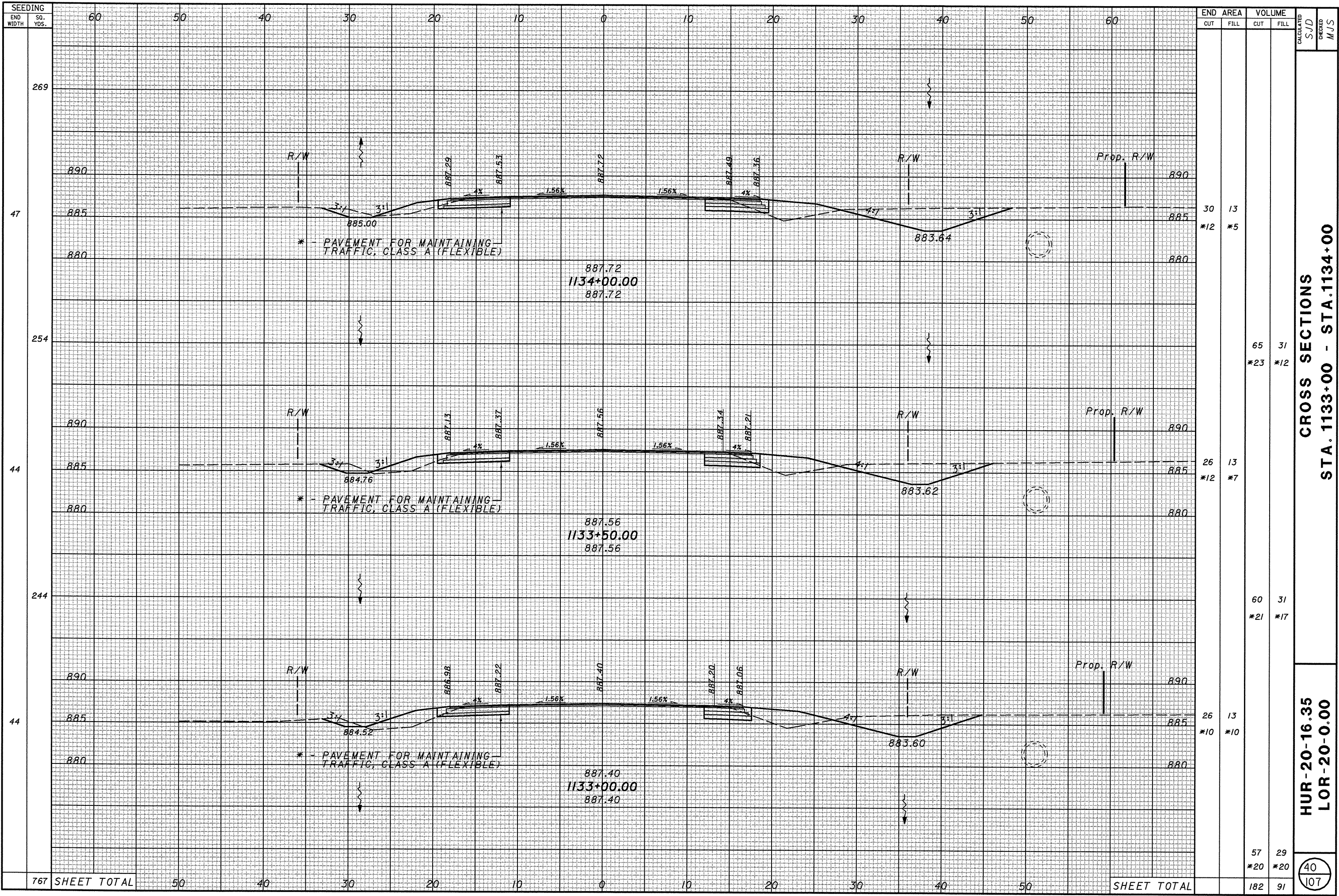
SHEET TOTAL

SHEET TOTAL

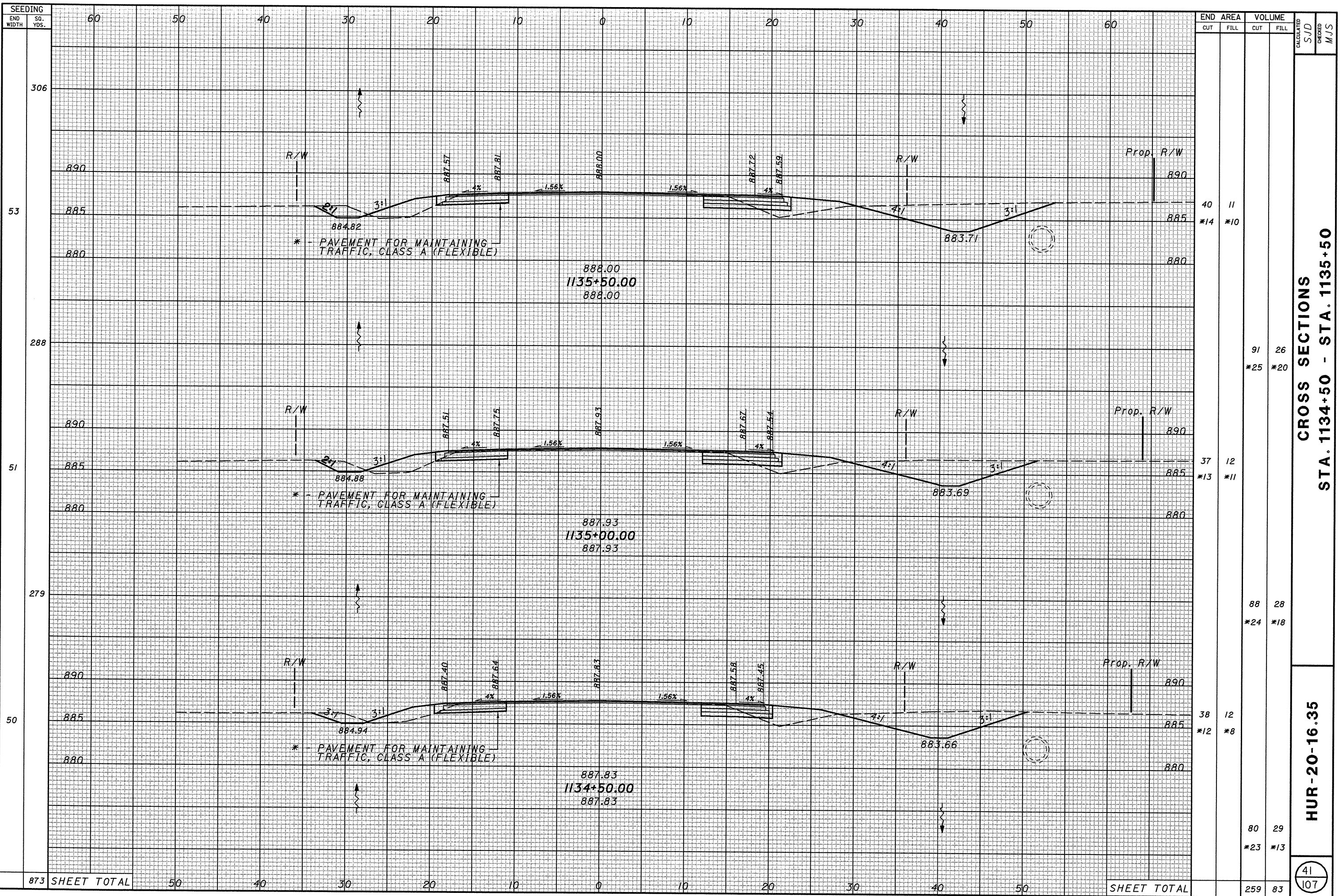
2025/01/20 10:10:00 I:\projects\7284\7284XS100_B.dgn

DATE 10/10/2007

number



I:\projects\7284\7284XS100_B.dgn
 2D.PLC 10/10/2007
 mshah1

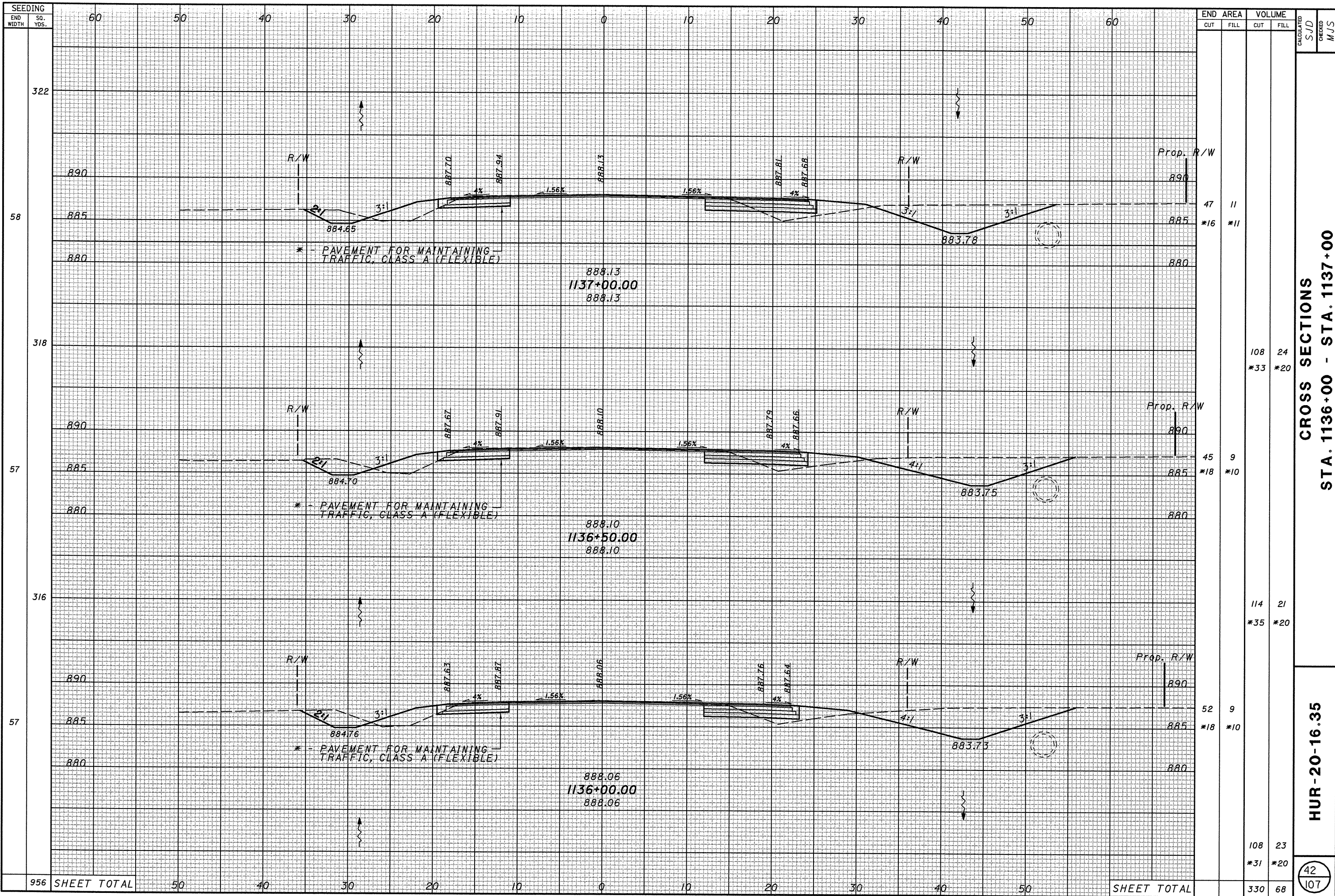


CROSS SECTIONS
STA. 1134+50 - STA. 1135+50

HUR-20-16.35

41
107

I:\projects\7284\7284XS100_B.dgn
 DATE: 10/10/2007
 DWG: 7284XS100_B.dgn
 PLOT: 10/10/2007



SEEDING															
	END WIDTH	SO. YDS.	60	50	40	30	20	10	0	10	20	30	40	50	60
322															
58															
318															
57															
316															
57															
956	SHEET TOTAL		50	40	30	20	10	0	10	20	30	40	50		SHEET TOTAL

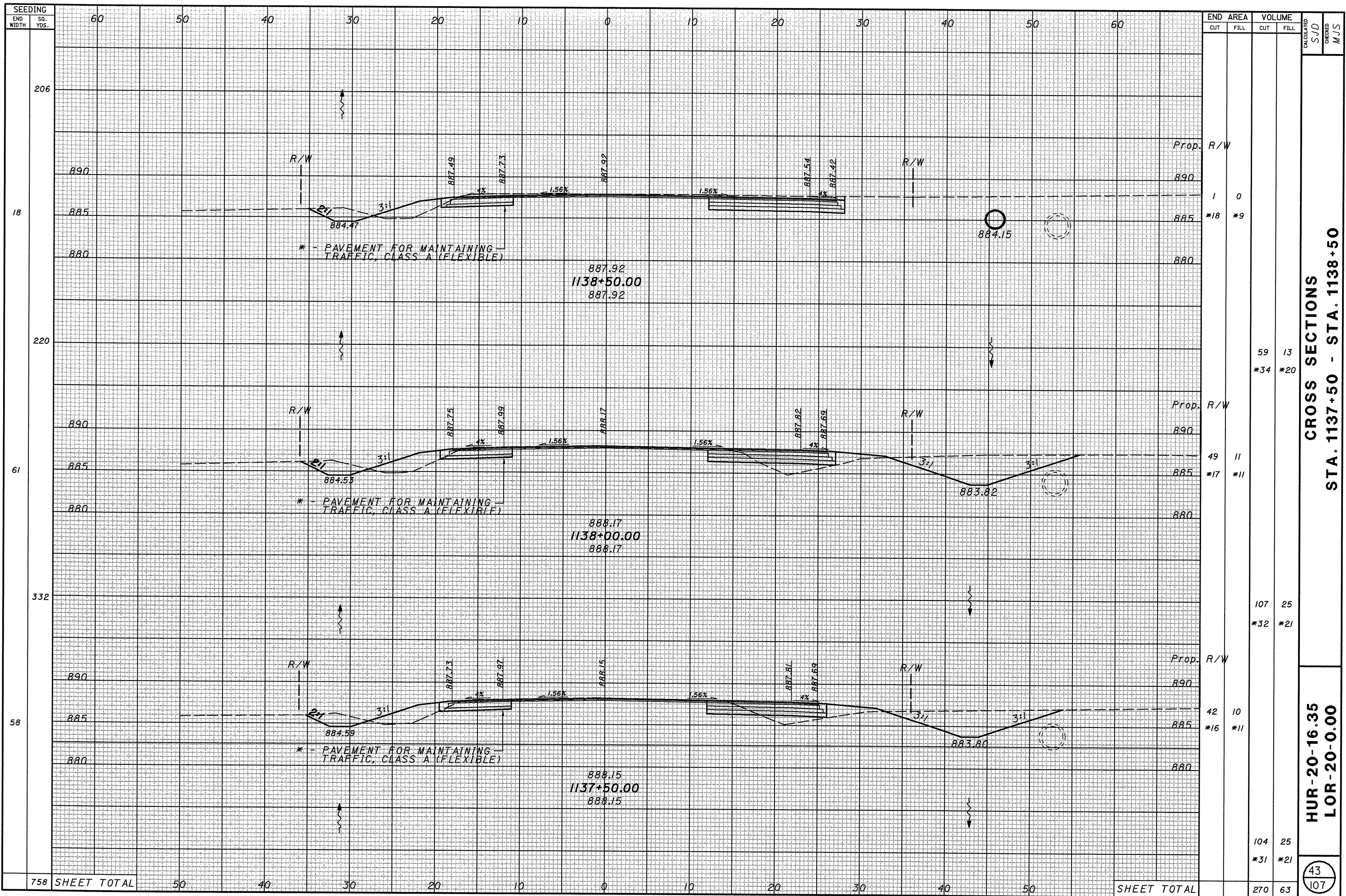
END	AREA		VOLUME		CALCULATED	SJD	CHECKED	MJS
	CUT	FILL	CUT	FILL				
47	11							
*16	*11							
108	24							
*33	*20							
114	21							
*35	*20							
52	9							
*18	*10							
108	23							
*31	*20							
330	68							

CROSS SECTIONS
 STA. 1136+00 - STA. 1137+00

HUR-20-16.35

42
 107

I:\projects\7284\7284XS100.B.dgn
 D:\JC 10/10/07
 10/10/07

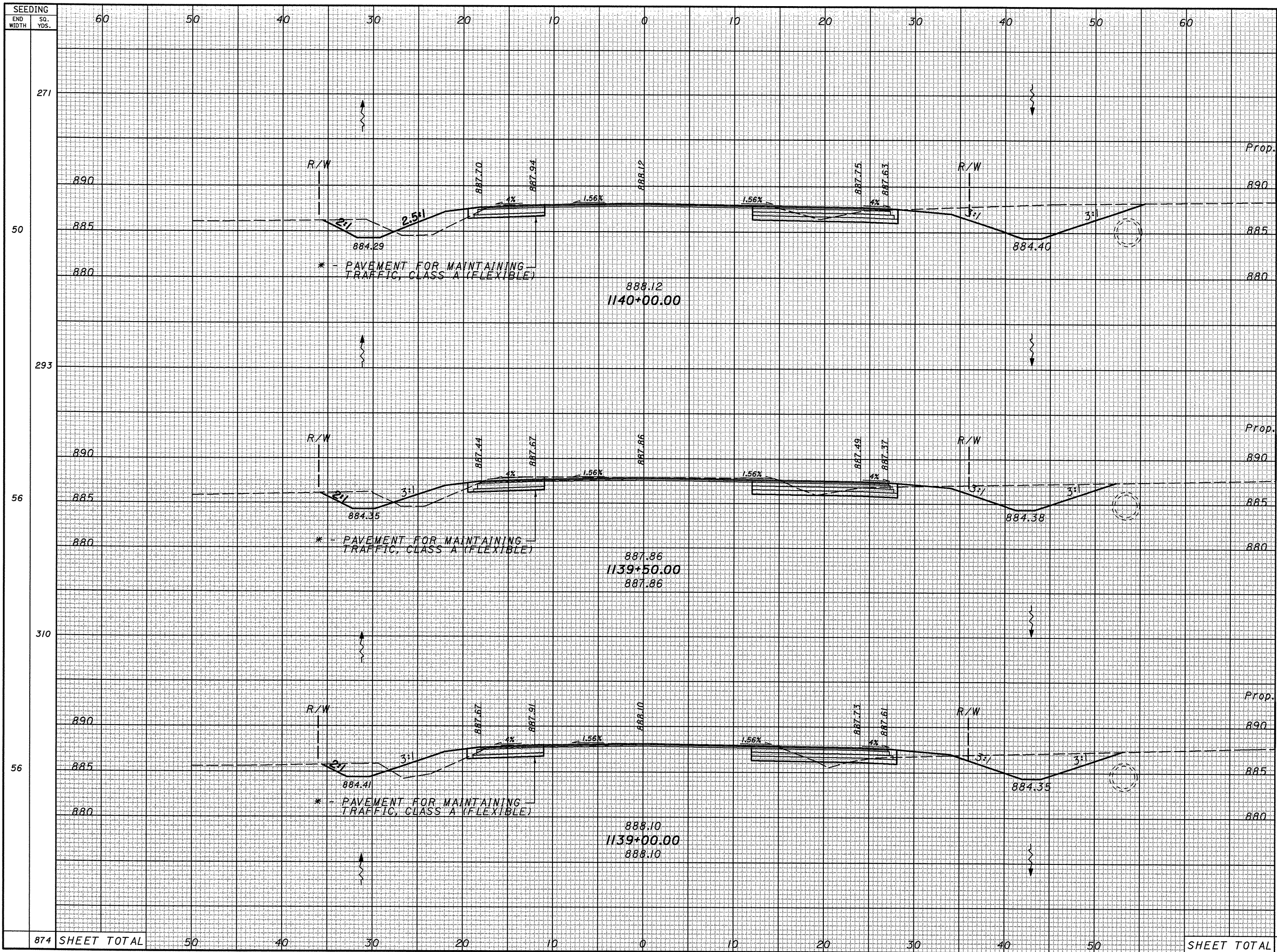


SEEDING	END WIDTH	SQ. YDS.	END AREA		VOLUME		CALCULATED SJD	CHECKED MJS										
			CUT	FILL	CUT	FILL												
206																		
18																		
220																		
61																		
332																		
58																		
758	SHEET TOTAL		50	40	30	20	10	0	10	20	30	40	50	SHEET TOTAL	270	63	43	107

CROSS SECTIONS
 STA. 1137+50 - STA. 1138+50

HUR-20-16.35
 LOR-20-0.00

I:\projects\7284\7284XS100.B.dgn
 DATE: 10/19/2007
 mod/ma

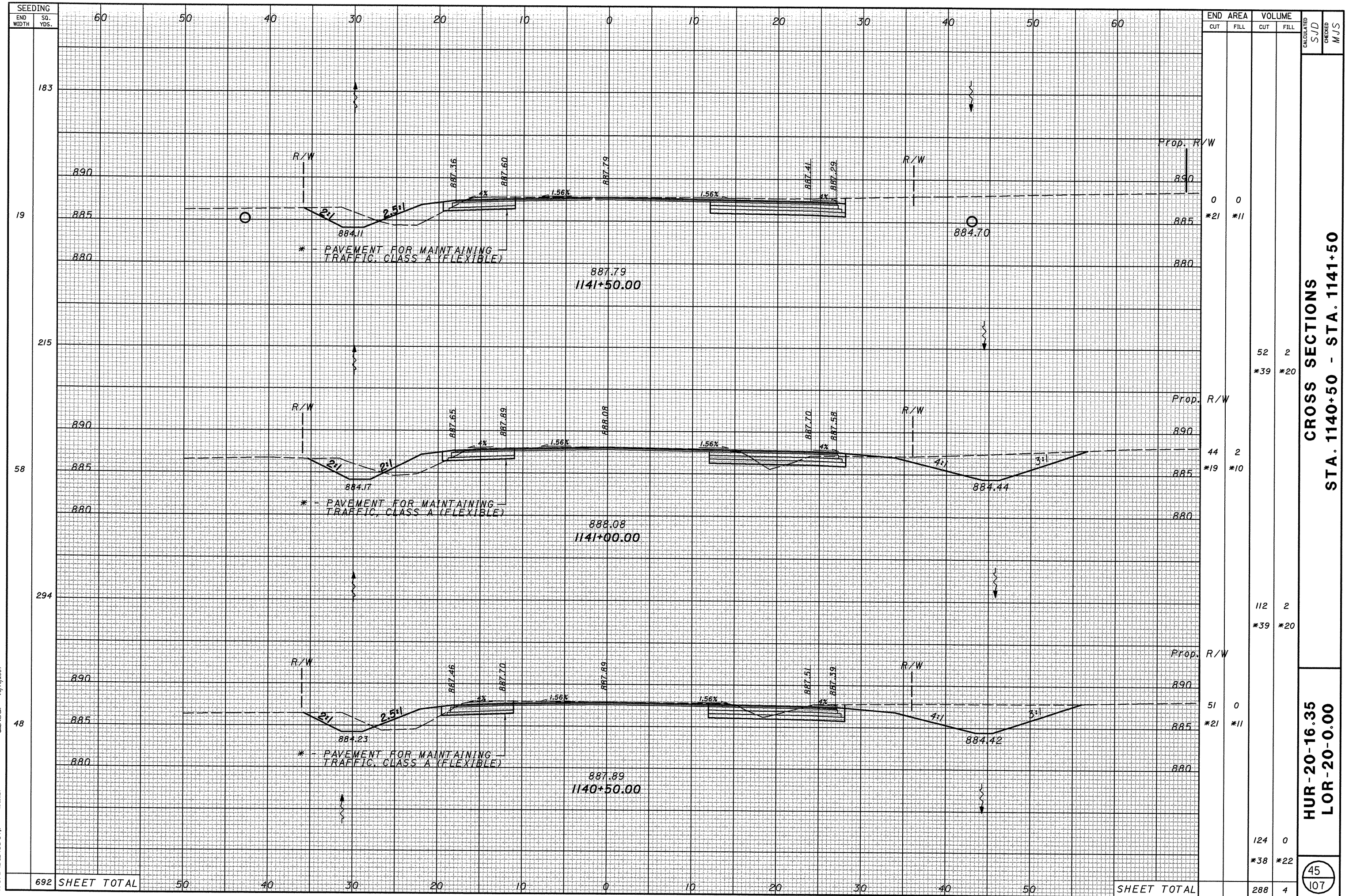


END	AREA		VOLUME		CALCULATED	CHECKED											
	CUT	FILL	CUT	FILL													
271																	
50																	
293																	
56																	
310																	
56																	
874	SHEET TOTAL		50	40	30	20	10	0	10	20	30	40	50	SHEET TOTAL		248	10

CROSS SECTIONS
STA. 1139+00 - STA. 1140+00

HUR-20-16.35
LOR-20-0.00

I:\projects\77284\77284XS100_B.dgn
 DWG: 10/10/2007
 mod1



CROSS SECTIONS
 STA. 1140+50 - STA. 1141+50

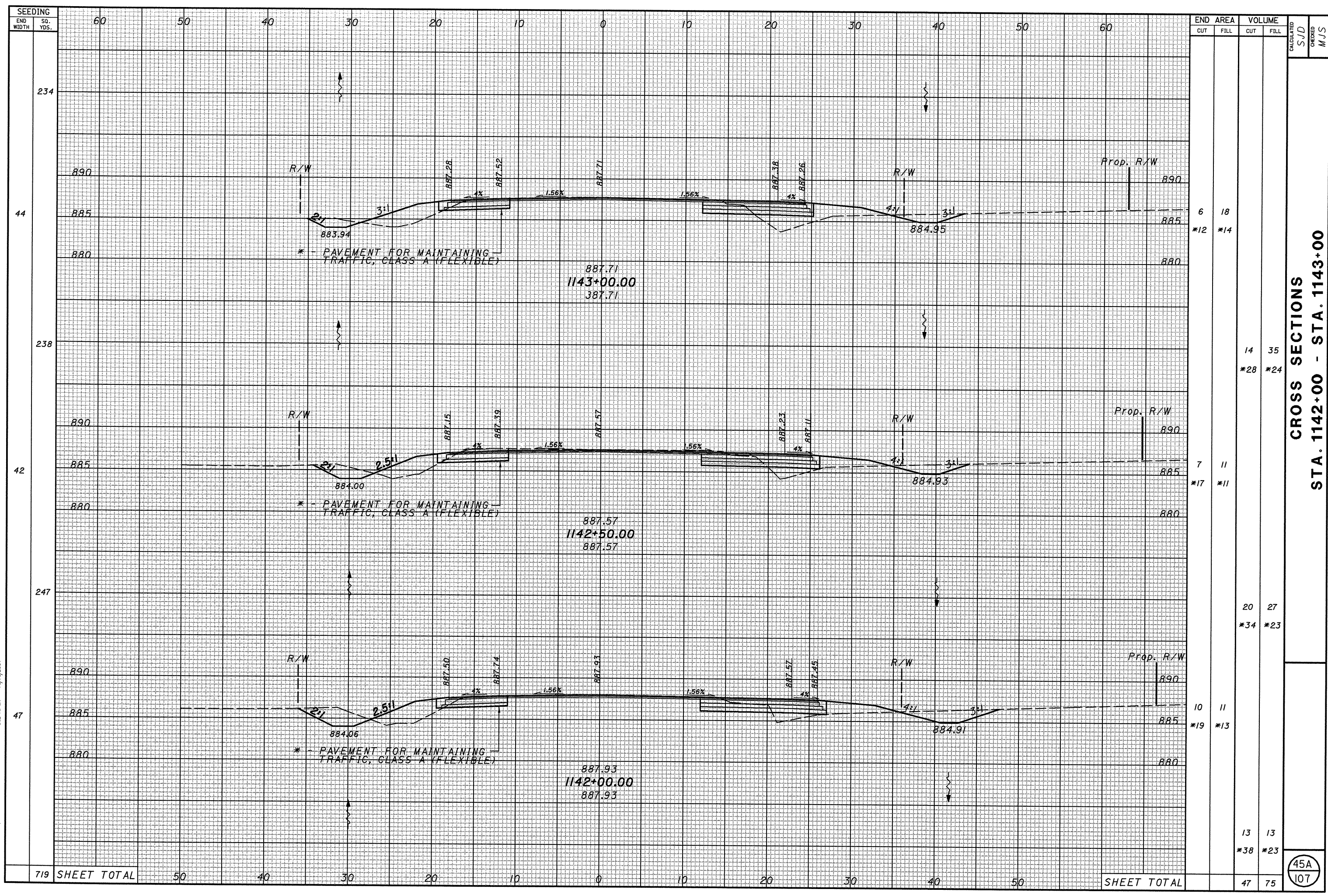
HUR-20-16.35
 LOR-20-0.00

45
 107

692 SHEET TOTAL

SHEET TOTAL

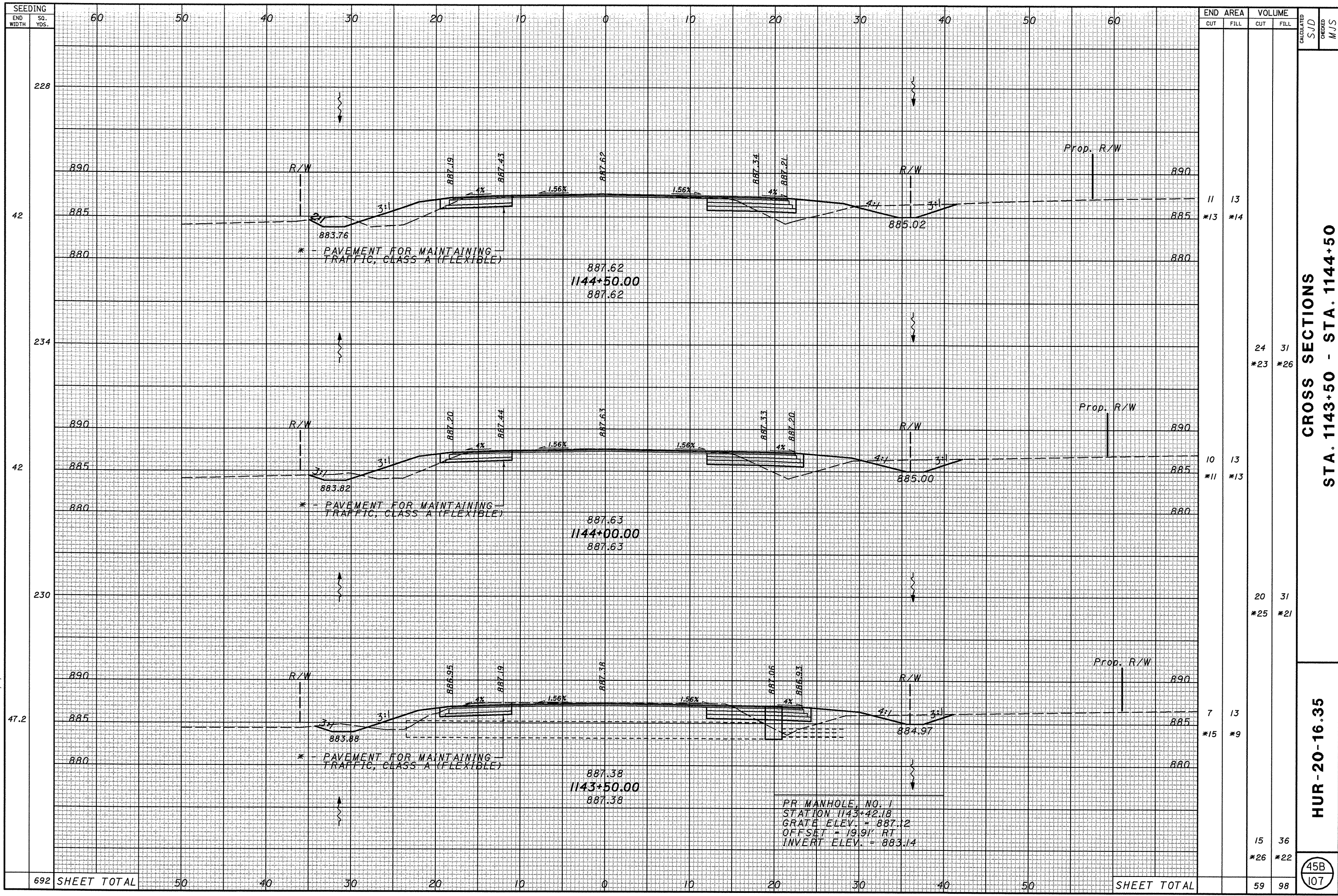
I:\projects\77284\77284XS100_B.dgn
 DATE: 10/10/2007
 DWG: 10/10/2007



END STA.	AREA		VOLUME		CALCULATED SJD	CHECKED MJS
	CUT	FILL	CUT	FILL		
1143+00.00	6	18				
*12		*14				
1142+50.00		14	35			
*28		*24				
1142+00.00	7	11				
*17		*11				
1142+00.00		20	27			
*34		*23				
1142+00.00	10	11				
*19		*13				
1142+00.00		13	13			
*38		*23				
719 SHEET TOTAL						
	50	40	30	20	10	0
	10	20	30	40	50	60
SHEET TOTAL						
	47	75				

CROSS SECTIONS
STA. 1142+00 - STA. 1143+00

i:\projects\7284\7284XS100_B.dgn
 DWG: 10/10/2007
 DWG USER: JLD



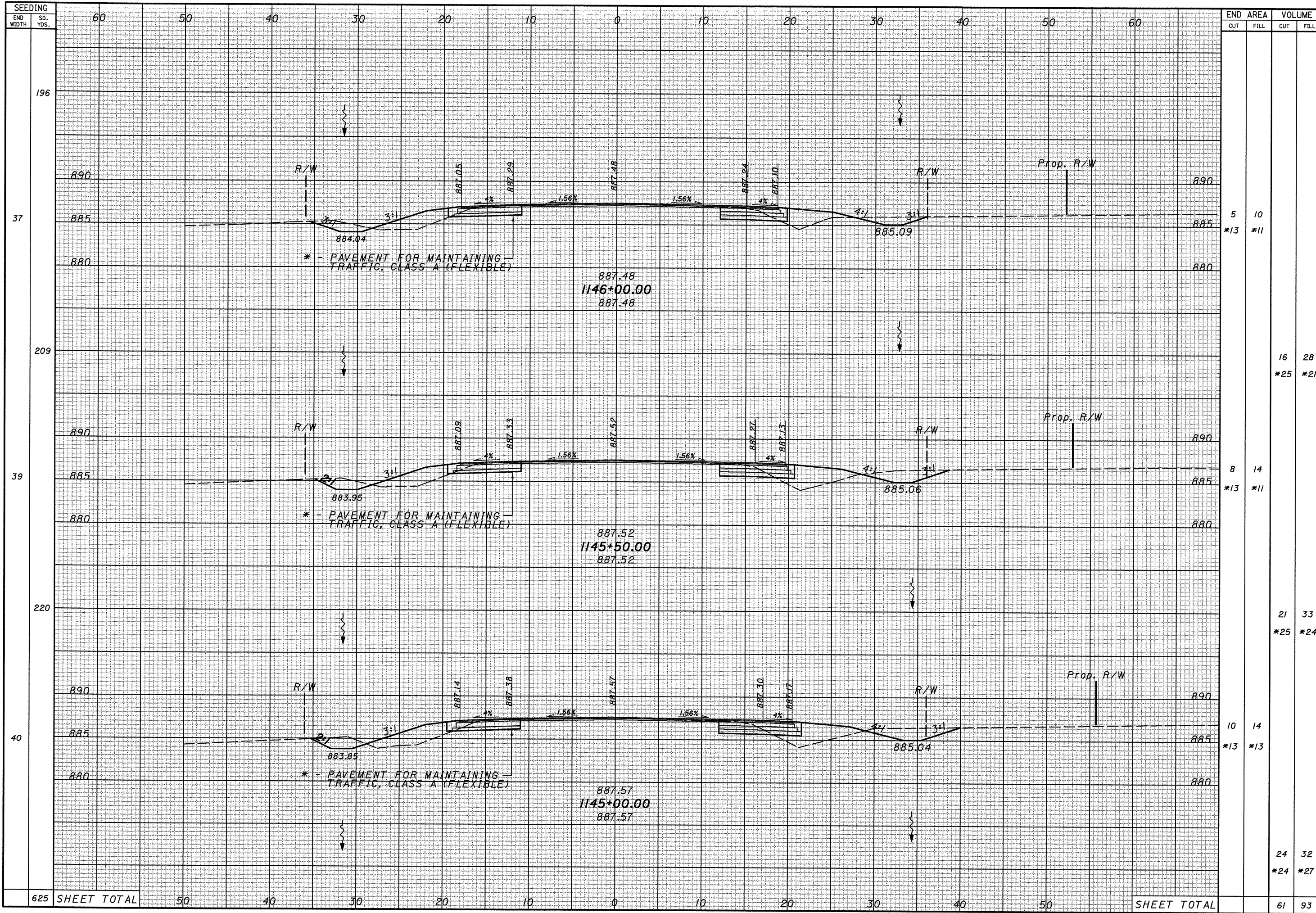
END WIDTH	SEEDING SQ. YDS.	END AREA		VOLUME		CALCULATED SJD	CHECKED MJS
		CUT	FILL	CUT	FILL		
42	228	11	13	*13	*14		
42	234	10	13	*11	*13	24	31
47.2	230	7	13	*15	*9	*23	*26
692	SHEET TOTAL	50	40	30	20	10	31
						*25	*21
						15	36
						*26	*22
						59	98

CROSS SECTIONS
 STA. 1143+50 - STA. 1144+50

HUR-20-16.35

45B
 107

S:\projects\7284\7284XS100.B.dgn
 DWG: 10/10/2007
 DWG USER: JLD/DM



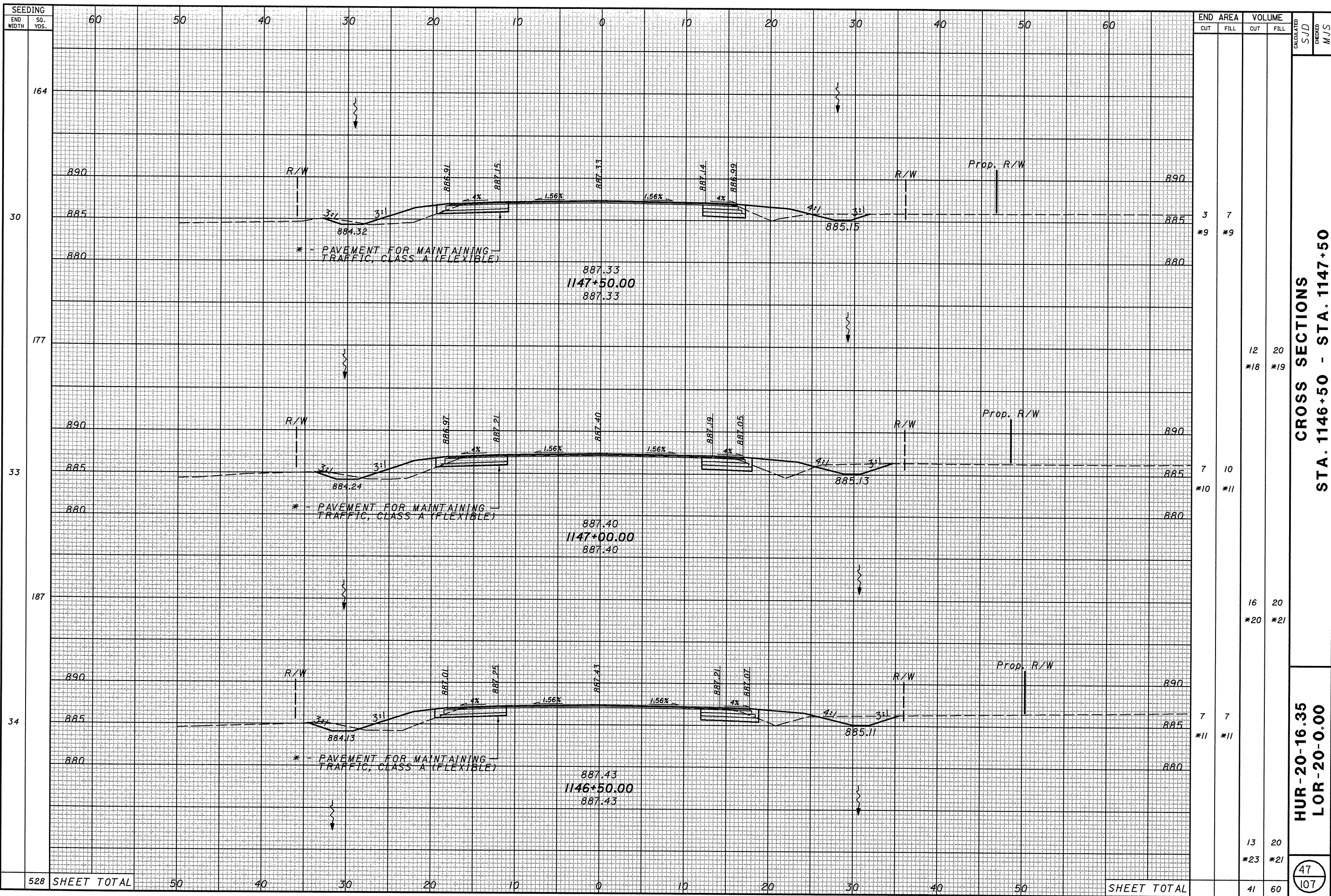
END WIDTH	AREA		VOLUME	
	CUT	FILL	CUT	FILL
196				
37	5	10	*13	*11
209		16	*25	28
39	8	14	*13	*11
220		21	*25	33
40	10	14	*13	*13
625	SHEET TOTAL		61	93

CROSS SECTIONS
 STA. 1145+00 - STA. 1146+00

HUR-20-16.35
 LOR-20-0.00

46
 107

I:\Projects\7284\7284XS100_B.dgn
 DATE: 10/10/2007
 DRAWN BY: [signature]
 CHECKED BY: [signature]



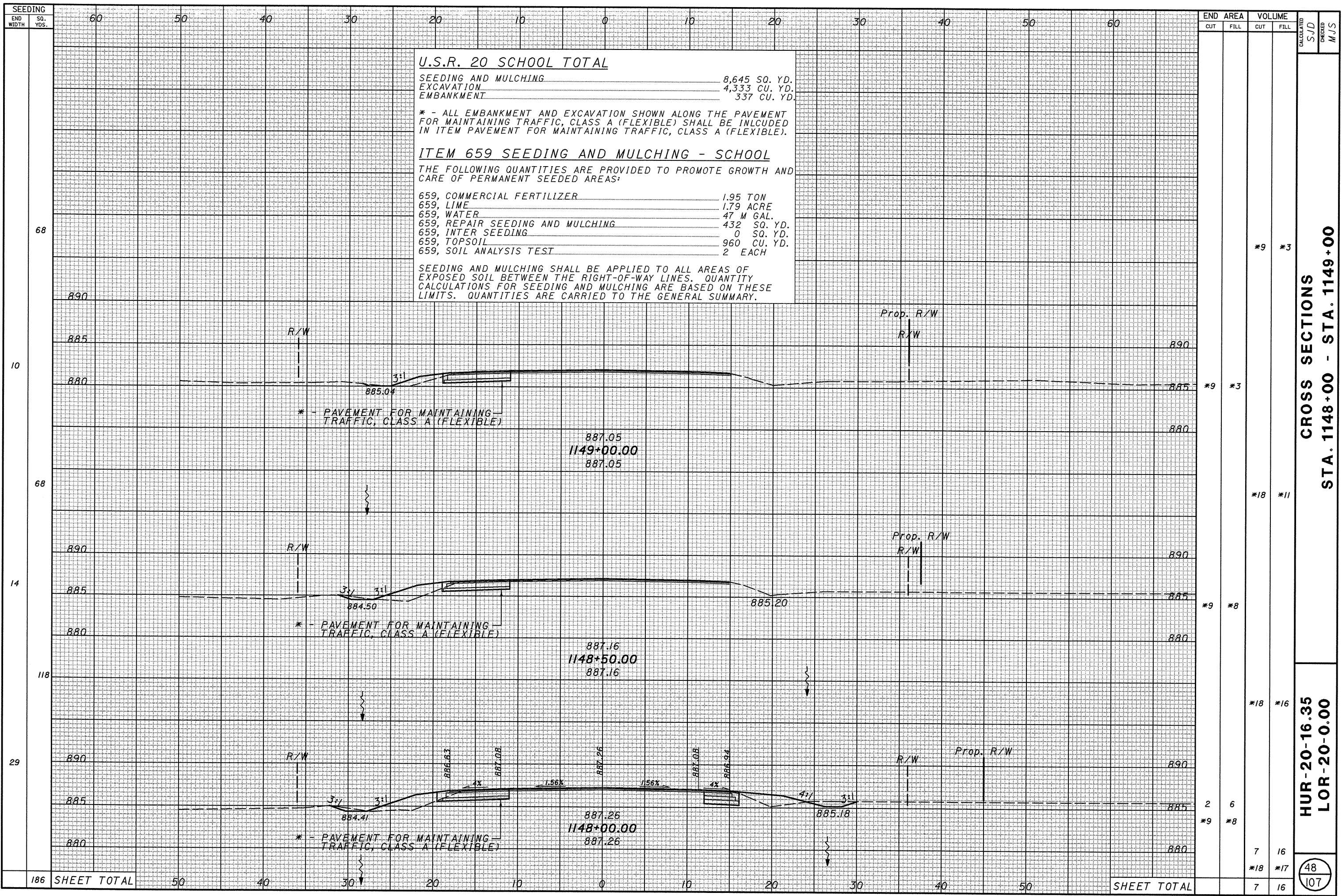
SEEDING	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED SJD	CHECKED MJS
			CUT	FILL	CUT	FILL		
164	60	30	3	7	*9	*9		
177	60	33	7	10	*10	*11	12	20
187	60	34	7	7	*11	*11	16	20
528	SHEET TOTAL		41	60	*23	*21	47	107

CROSS SECTIONS
STA. 1146+50 - STA. 1147+50

HUR-20-16.35
LOR-20-0.00

47
 107

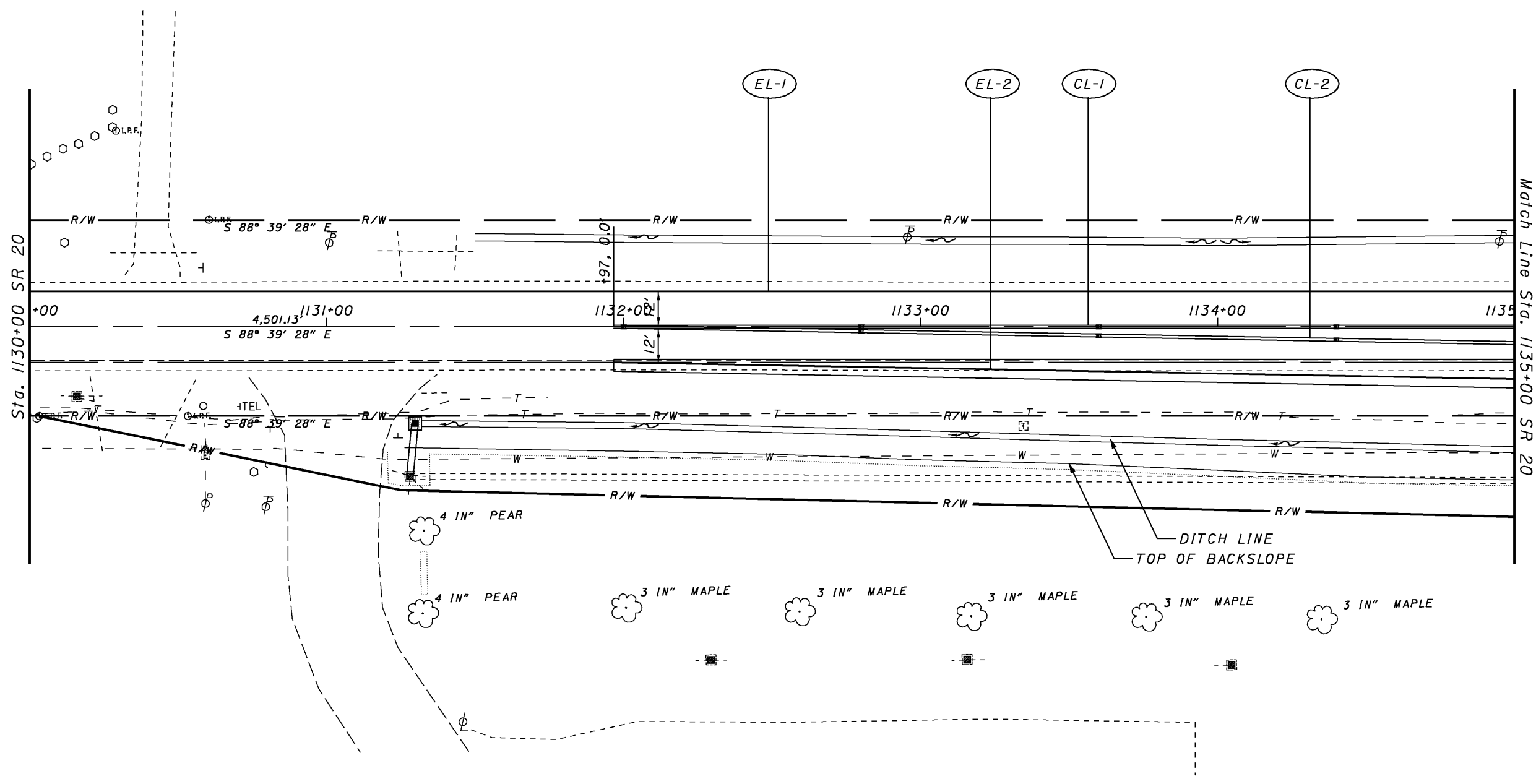
I:\Projects\71284\71284XS100_B.dgn
 DWG 10/10/2007
 DWG 10/10/2007



CROSS SECTIONS
 STA. 1148+00 - STA. 1149+00

HUR-20-16.35
 LOR-20-0.00

I:\projects\77284\77284TC100_bldgn
 11/15/2007

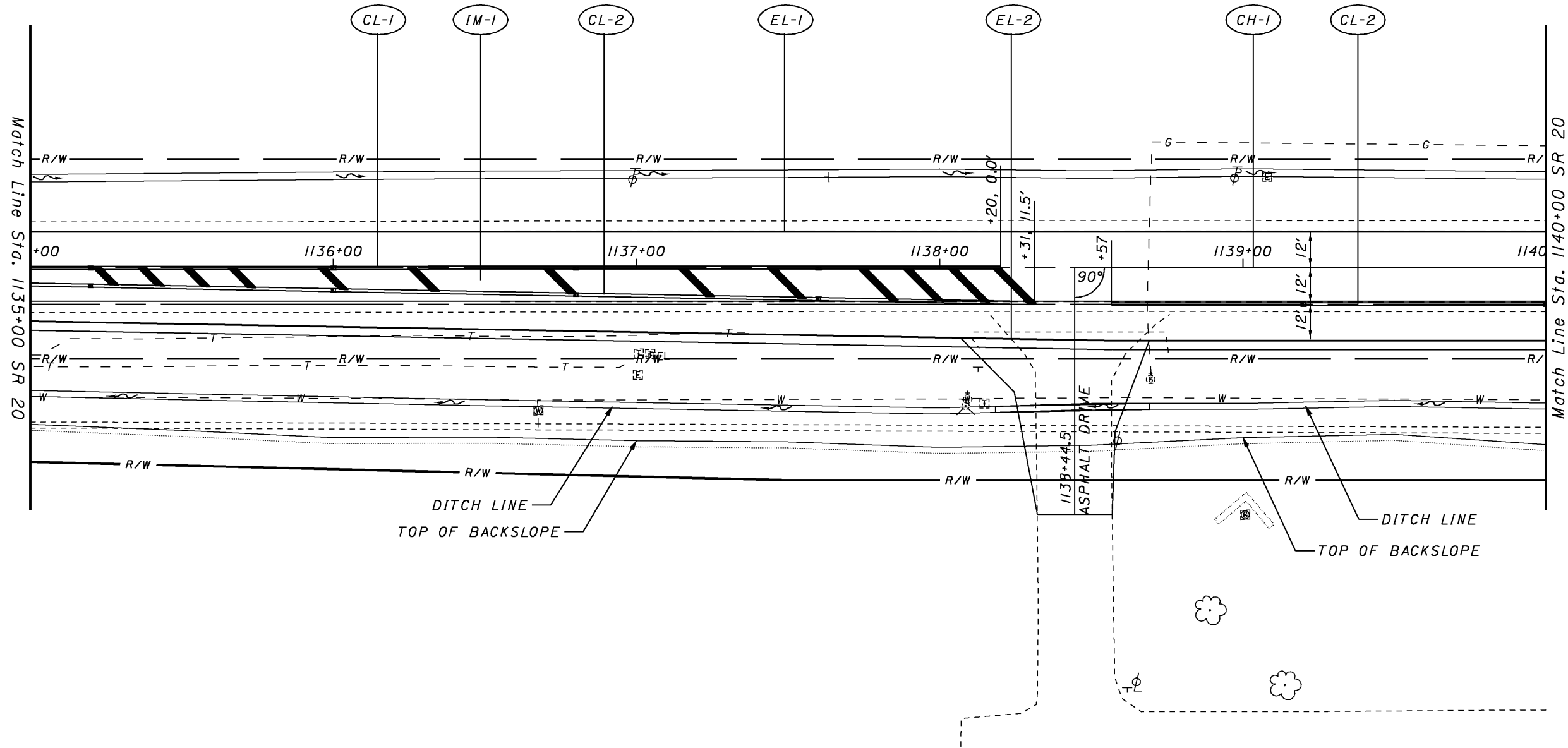


CALCULATED
SJD
CHECKED
MJS

0 10 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL
STA. 1130+00 - STA. 1135+00

HUR-20-16.35
 LOR-20-0.00



CALCULATED
SJD

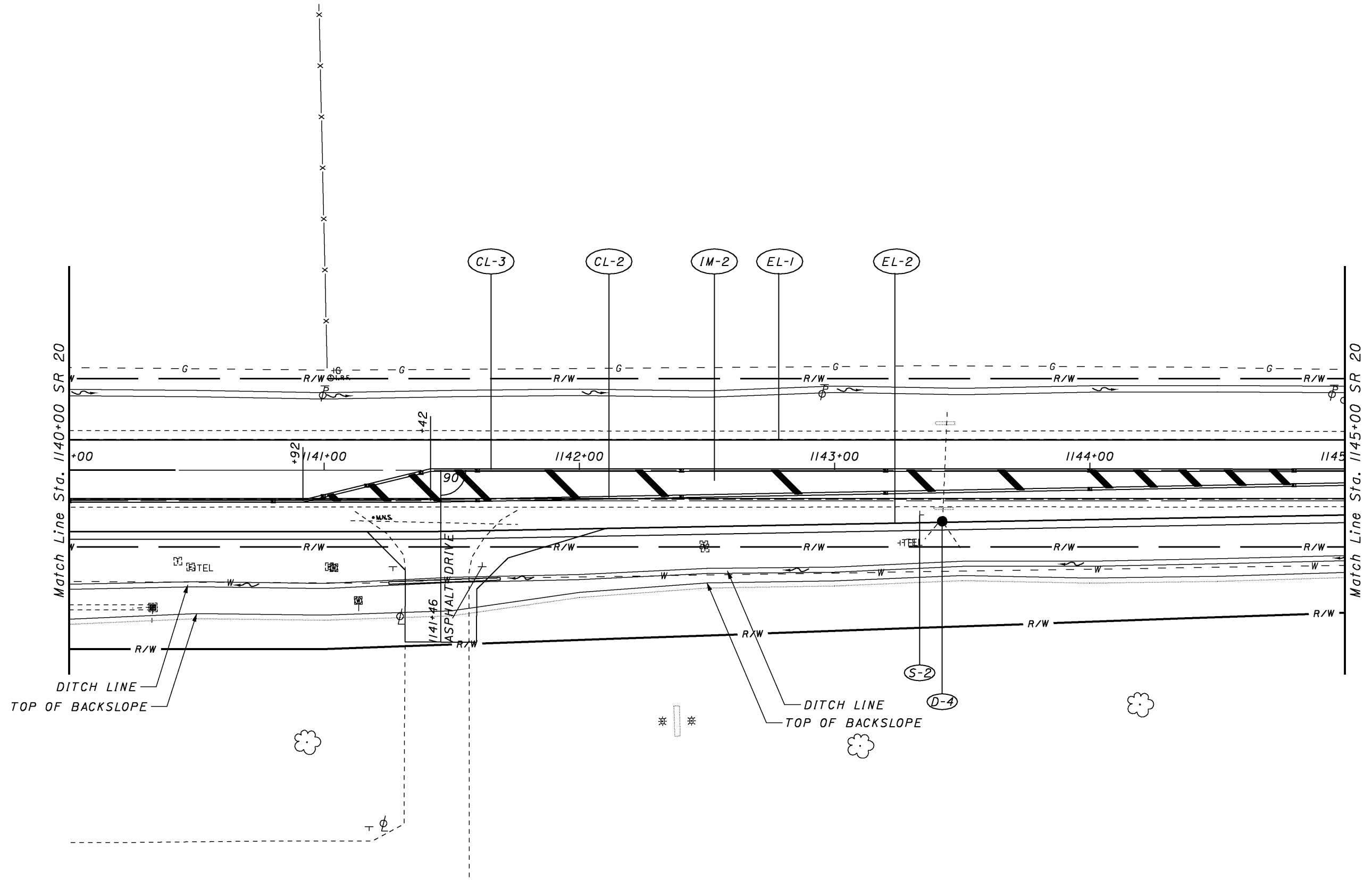
CHECKED
MJS

0 10 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL
STA. 1135+00 - STA. 1140+00

HUR-20-16.35
 LOR-20-0.00

I:\projects\77284\77284TC100_b3.dgn
11/15/2007



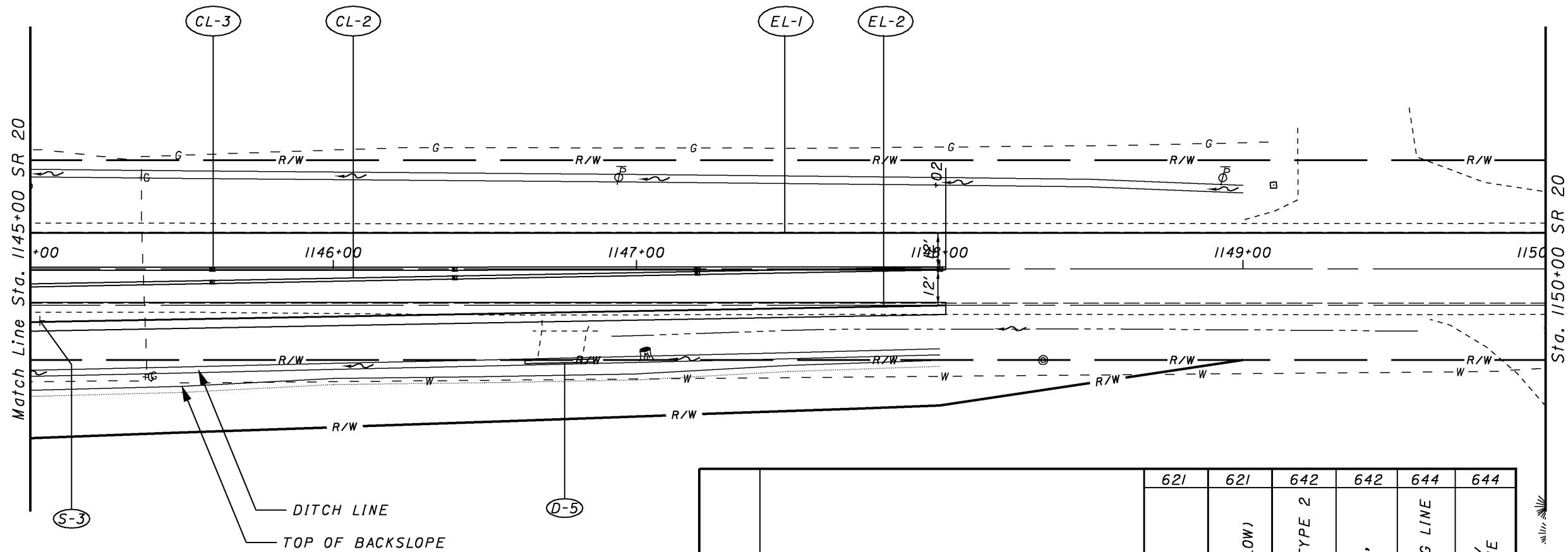
CALCULATED
SJD
CHECKED
MJS

0 10 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL
STA. 1140+00 - STA. 1145+00

HUR-20-16.35
LOR-20-0.00

51
107



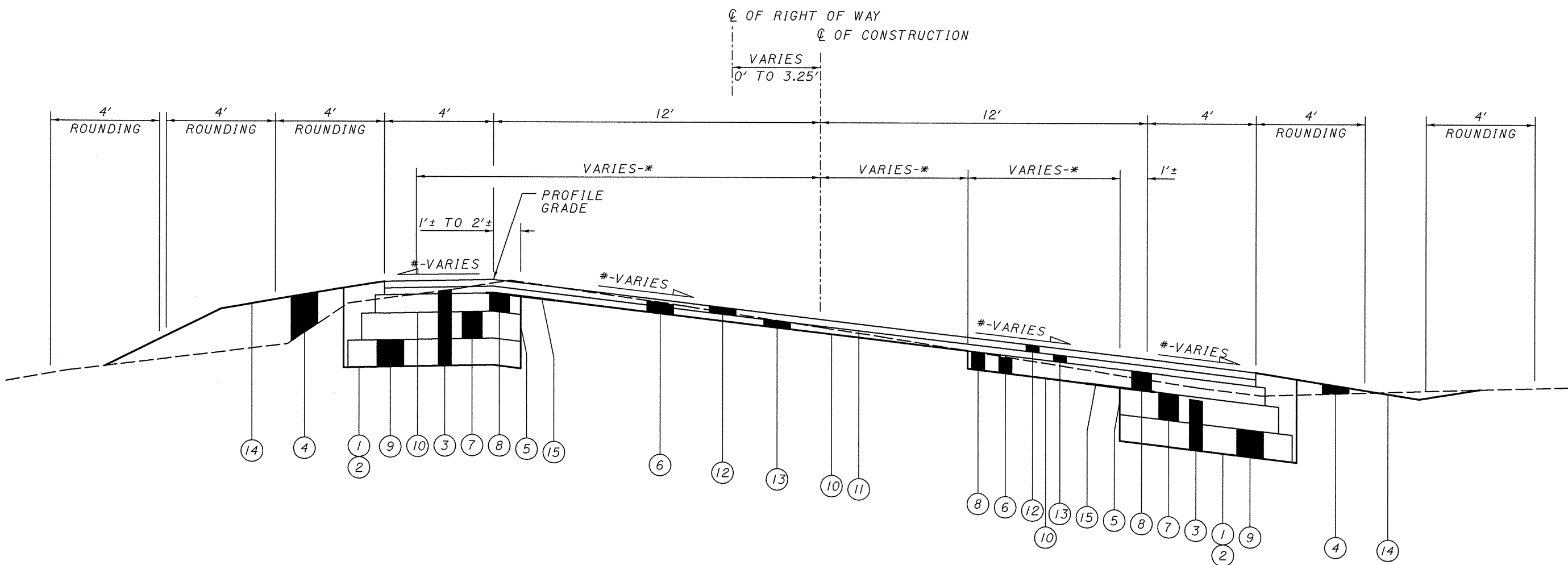
REF NO.	STATION TO STATION		621	621	642	642	644	644
			RPM (WHITE/RED)	RPM (YELLOW/YELLOW)	EDGE LINE, TYPE 2	CENTER LINE, TYPE 2	CHANNELIZING LINE	TRANSVERSE/DIAGONAL LINE
			EACH	EACH	MILE	MILE	FT	FT
CL-1	1131+96 US 20	1138+20 US 20		8		0.08		
CL-2	1131+96 US 20	1148+02 US 20		18		0.30		
CL-3	1140+91 US 20	1148+02 US 20		12		0.07		
CH-1	1138+57 US 20	1140+42 US 20	5				185	
EL-1	1131+96 US 20	1148+02 US 20			0.30			
EL-2	1131+96 US 20	1148+02 US 20			0.30			
IM-1	1130+50 US 20	1149+50 US 20						158
IM-2	1130+50 US 20	1149+50 US 20						155
TOTALS INCLUDED IN THE PAVEMENT MARKING SUB-SUMMARY			5	38	0.60	0.07	185	313

CALCULATED
SJD
CHECKED
MJS

0 10 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL
STA. 1145+00 - STA 1149+00

HUR-20-16.35
LOR-20-0.00



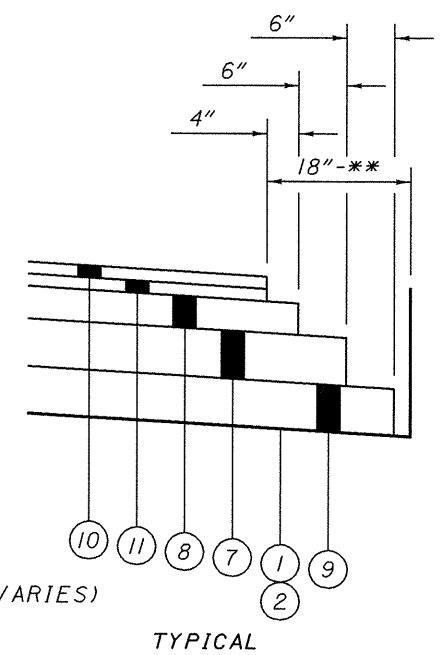
STA 1331+25.00 TO STA. 1333+75.00
STA 1337+36.52 TO STA. 1338+15.00

TYPICAL 8

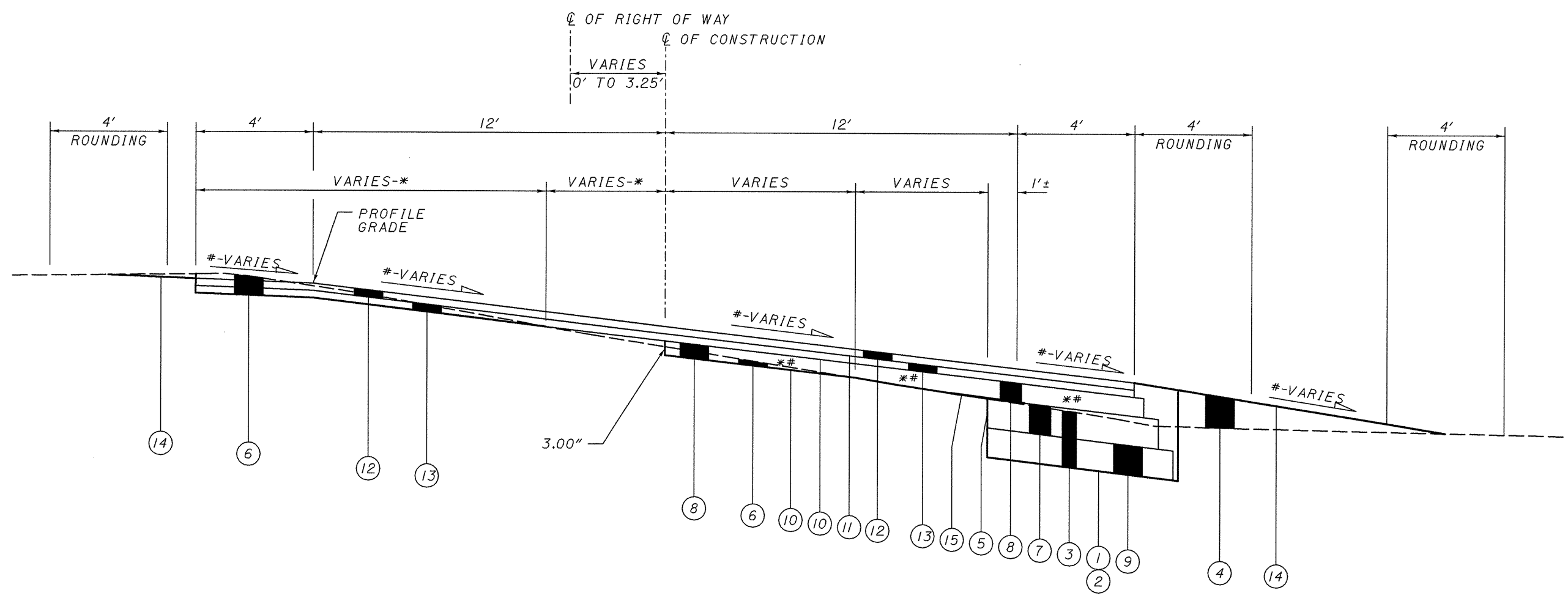
- # - SEE CROSS SECTIONS FOR CROSS SLOPE. SEE SUPER ELEVATION TABLE FOR FURTHER INFORMATION.
- * - SEE CROSS SECTIONS AND PLANING TABLE FOR FURTHER INFORMATION ON LIMITS AND DEPTHS OF PLANING.
- ** - EXCAVATION, PROOF ROLLING, AND SUBGRADE COMPACTION SHALL EXTEND 18" BEYOND THE EDGE OF THE PROPOSED ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) AS STATED IN CMS 204.03.
- ** - ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (3.00" - 4.00") SHALL HAVE A DEPTH OF 4.00" ON THE NEW PAVEMENT AREA WHILE HAVING A CONSISTANT 3.00" DEPTH IN PLANED AREA. THE AREA BETWEEN THE 3.00" DEPTH AND THE 4.00" DEPTH SHALL HAVE A VARIABLE DEPTH BETWEEN 3.00" TO 4.00" WHILE MAINTAINING THE PROPOSED CROSS SLOPE.

LEGEND

- | | |
|--|---|
| ① ITEM 204 - SUBGRADE COMPACTION | ⑨ ITEM 304 - AGGREGATE BASE |
| ② ITEM 204 - PROOF ROLLING | ⑩ ITEM 407 - TACK COAT |
| ③ ITEM 203 - EXCAVATION | ⑪ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE |
| ④ ITEM 203 - EMBANKMENT | ⑫ ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (1.50") |
| ⑤ ITEM 252 - FULL DEPTH PAVEMENT SAWING | ⑬ ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (VARIES) |
| ⑥ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE) | ⑭ ITEM 659 - SEEDING AND MULCHING |
| ⑦ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (6.00") | ⑮ ITEM 690 - SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS |
| ⑧ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (3.00") | |



I:\projects\7284\7284GY001.dgn
 DATE: 10/10/2007
 DRAWN BY: MORGAN



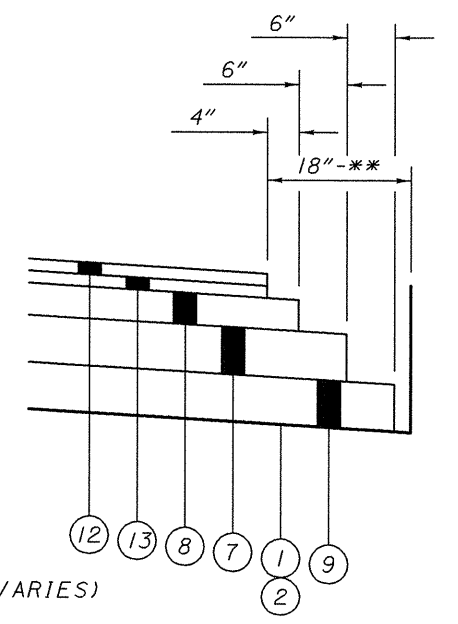
STA 1333+75.00 TO STA. 1337+36.52

TYPICAL 9

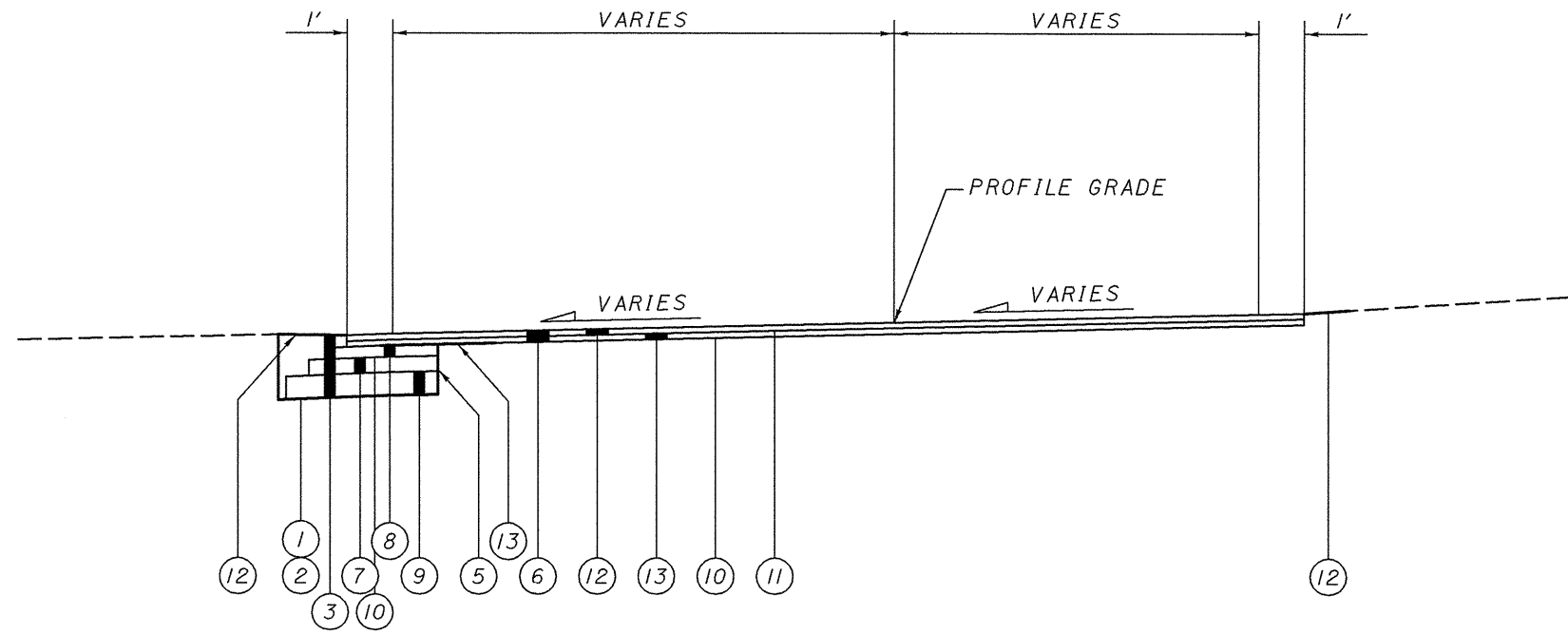
- # - SEE CROSS SECTIONS FOR CROSS SLOPE. SEE SUPER ELEVATION TABLE FOR FURTHER INFORMATION.
- * - SEE PLAN SHEETS, CROSS SECTIONS, AND PLANING DEPTH TABLE FOR FURTHER INFORMATION ON LIMITS AND DEPTHS OF PLANING AND LIMITS OF ITEM 301, ASPHALT CONCRETE (3.00").
- ** - EXCAVATION, PROOF ROLLING, AND SUBGRADE COMPACTION SHALL EXTEND 18" BEYOND THE EDGE OF THE PROPOSED ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) AS STATED IN CMS 204.03.

LEGEND

- | | |
|--|---|
| ① ITEM 204 - SUBGRADE COMPACTION | ⑨ ITEM 304 - AGGREGATE BASE |
| ② ITEM 204 - PROOF ROLLING | ⑩ ITEM 407 - TACK COAT |
| ③ ITEM 203 - EXCAVATION | ⑪ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE |
| ④ ITEM 203 - EMBANKMENT | ⑫ ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (1.50") |
| ⑤ ITEM 252 - FULL DEPTH PAVEMENT SAWING | ⑬ ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (VARIES) |
| ⑥ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE) | ⑭ ITEM 659 - SEEDING AND MULCHING |
| ⑦ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (6.00") | ⑮ ITEM 690 - SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS |
| ⑧ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (3.00") | |



I:\projects\77284\77284CY002.dgn
 DATE: 10/19/2007
 DWG: SLD/ELM
 PLOT: 10/19/2007



STA 1+50.00 TO STA. 2+68.00

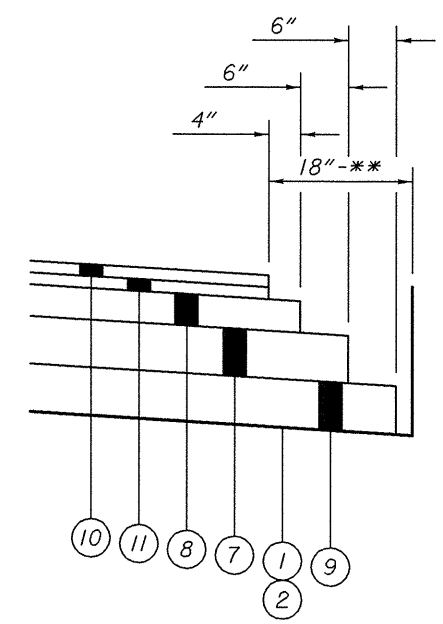
TYPICAL 10

- SEE CROSS SECTIONS FOR CROSS SLOPE.

** - EXCAVATION, PROOF ROLLING, AND SUBGRADE COMPACTION SHALL EXTEND 18" BEYOND THE EDGE OF THE PROPOSED ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) AS STATED IN CMS 204.03.

LEGEND

- | | |
|--|---|
| ① ITEM 204 - SUBGRADE COMPACTION | ⑨ ITEM 304 - AGGREGATE BASE |
| ② ITEM 204 - PROOF ROLLING | ⑩ ITEM 407 - TACK COAT |
| ③ ITEM 203 - EXCAVATION | ⑪ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE |
| ④ ITEM 203 - EMBANKMENT | ⑫ ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (1.50") |
| ⑤ ITEM 252 - FULL DEPTH PAVEMENT SAWING | ⑬ ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (VARIES) |
| ⑥ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE) | ⑭ ITEM 659 - SEEDING AND MULCHING |
| ⑦ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (6.00") | ⑮ ITEM 690 - SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS |
| ⑧ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (3.00") | |



TYPICAL SECTION - MAIN ST.
SLM 25.20 TO 25.34

HUR-20-16.35
LOR-20-0.00

I:\projects\7284\7284G\003.dgn
DATE: 10/12/2007
DRAWN BY: [unreadable]

LEFT SIDE				CENTERLINE CONSTRUCTION			RIGHT SIDE					REMARKS
PROFILE GRADE / EDGE ELEVATION	TRANSITION RATE	CROSSSLOPE	WIDTH	STATION	ELEVATION CORRECTION	CENTERLINE CONSTRUCTION ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
871.33		0.0160	12.00	1331+25.00	0.192	871.52	12.00	-0.0160	-0.192		871.33	
871.21		0.0160	↑	1331+50.00	0.192	871.40	↑	-0.0160	-0.192		871.21	
871.20		0.0160		1331+53.18	0.192	871.39		-0.0160	-0.192		871.20	
871.14		0.0160		1331+75.00	0.192	871.33		-0.0160	-0.192		871.14	
871.16		0.0160		1331+93.98	0.192	871.35		-0.0160	-0.192		871.16	NORMAL CROWN
871.16	164	0.0129		1332+00.00	0.155	871.32		-0.0160	-0.192		871.12	
871.19	164	0.0089		1332+07.99	0.107	871.30		-0.0160	-0.192		871.10	
871.28	164	0.0003		1332+25.00	0.003	871.28		-0.0160	-0.192		871.09	
871.28	164	0.0000		1332+25.61	0.000	871.28		-0.0160	-0.192		871.09	HALF FLAT
871.50	164	-0.0124		1332+50.00	-0.149	871.35		-0.0160	-0.192		871.16	
871.57	164	-0.0160		1332+57.23	-0.193	871.38		-0.0160	-0.192		871.19	CROWN REMOVED
871.59	164	-0.0168		1332+58.71	-0.202	871.39		-0.0168	-0.201		871.19	
871.74	164	-0.0251		1332+75.00	-0.301	871.44		-0.0250	-0.300	164	871.14	
871.93	164	-0.0377		1333+00.00	-0.453	871.48		-0.0377	-0.452	164	871.03	
872.06	164	-0.0504		1333+25.00	-0.605	871.46		-0.0504	-0.604	164	870.85	
872.12	164	-0.0600		1333+43.98	-0.720	871.40		-0.0600	-0.720	164	870.68	FULL SUPER
872.14		-0.0600		1333+50.00	-0.720	871.42		-0.0600	-0.720		870.70	↑
872.16		-0.0600		1333+75.00	-0.720	871.44		-0.0600	-0.720		870.72	
872.14		-0.0600		1334+00.00	-0.720	871.42		-0.0600	-0.720		870.70	
872.08		-0.0600		1334+25.00	-0.720	871.36		-0.0600	-0.720		870.64	
872.03		-0.0600		1334+50.00	-0.720	871.31		-0.0600	-0.720		870.59	
871.97		-0.0600		1334+75.00	-0.720	871.25		-0.0600	-0.720		870.53	
871.92		-0.0600		1335+00.00	-0.720	871.20		-0.0600	-0.720		870.48	
871.87		-0.0600		1335+25.00	-0.720	871.15		-0.0600	-0.720		870.43	
871.81		-0.0600		1335+50.00	-0.720	871.09		-0.0600	-0.720		870.37	
871.76		-0.0600		1335+75.00	-0.720	871.04		-0.0600	-0.720		870.32	
871.70		-0.0600		1336+00.00	-0.720	870.98		-0.0600	-0.720		870.26	
871.65		-0.0600		1336+25.00	-0.720	870.93		-0.0600	-0.720		870.21	
871.59		-0.0600		1336+50.00	-0.720	870.87		-0.0600	-0.720		870.15	
871.50		-0.0600		1336+75.00	-0.720	870.78		-0.0600	-0.720		870.06	
871.32		-0.0600		1337+00.00	-0.720	870.60		-0.0600	-0.720		869.88	
871.05		-0.0600		1337+25.00	-0.720	870.33		-0.0600	-0.720		869.61	↓
870.91		-0.0600		1337+35.74	-0.720	870.19		-0.0600	-0.720		869.47	FULL SUPER
870.69	164	-0.0528		1337+50.00	-0.633	870.06		-0.0528	-0.633	164	869.42	
870.26	164	-0.0401		1337+75.00	-0.481	869.78		-0.0401	-0.481	164	869.30	
869.73	164	-0.0274		1338+00.00	-0.329	869.40		-0.0274	-0.329	164	869.07	
869.25	164	-0.0161		1338+22.45	-0.193	869.06		-0.0160	-0.192	164	868.87	CROWN REMOVED
869.20	164	-0.0148		1338+25.00	-0.177	869.02		-0.0160	-0.192		868.83	
868.73	164	-0.0021		1338+50.00	-0.025	868.70		-0.0160	-0.192		868.51	
868.65	164	0.0000		1338+54.11	0.000	868.65		-0.0160	-0.192		868.46	HALF FLAT
868.32	164	0.0106		1338+75.00	0.127	868.45		-0.0160	-0.192		868.25	
868.16	164	0.0160		1338+85.74	0.192	868.35		-0.0160	-0.192		868.16	NORMAL CROWN
867.97		0.0160		1339+00.00	0.192	868.16		-0.0160	-0.192		867.97	
867.67		0.0160		1339+23.65	0.192	867.86		-0.0160	-0.192		867.67	
867.34		0.0160	12.00	1339+50.00	0.192	867.53	12.00	-0.0160	-0.192		867.34	

SUPERELEVATION TABLE

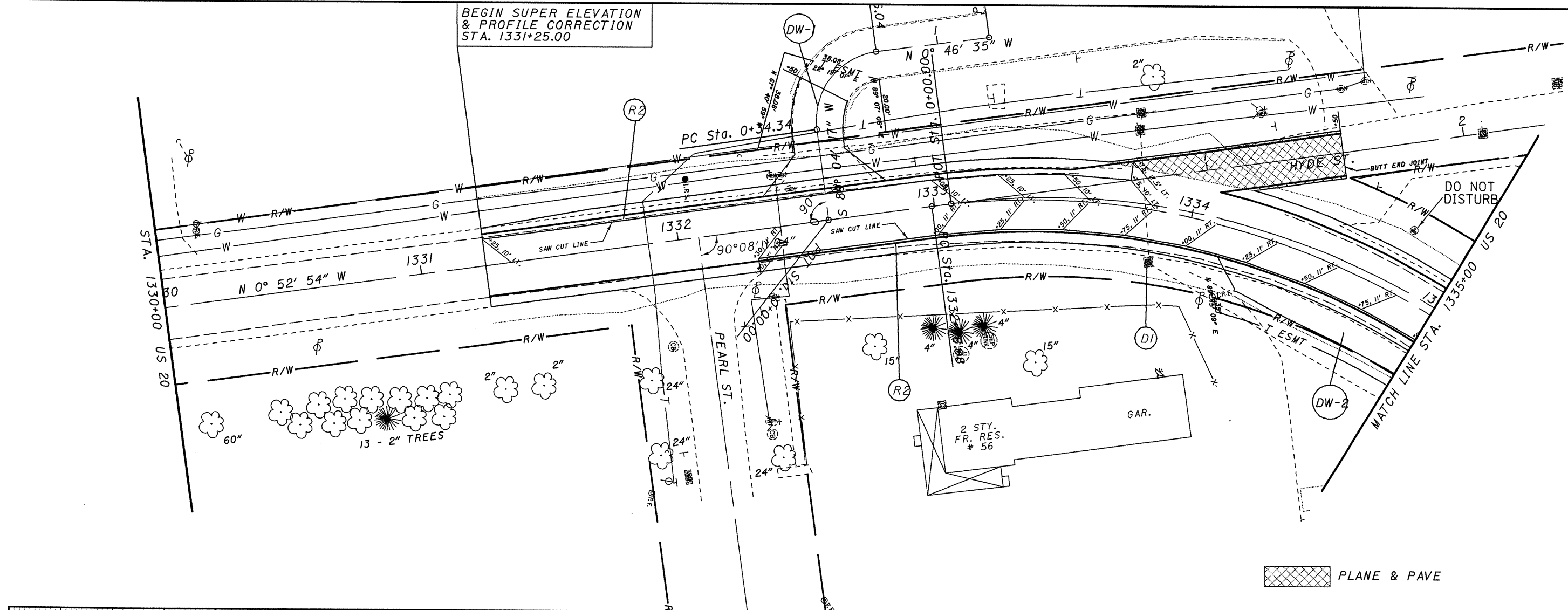
HUR-20-16.35
LOR-20-0.00

STATION	LEFT SIDE OF CL OF CONSTRUCTION					CENTERLINE OF CONSTRUCTION	RIGHT SIDE OF CL OF CONSTRUCTION				
	PLANING DEPTH ALONG EDGE OF SHOULDER	PLANING DEPTH ALONG EDGE OF PAVEMENT	PLANING DEPTH AT SAW CUT ALONG PAVEMENT RECONSTRUCTION	NUMBER OF FEET FROM CL OF CONSTRUCTION TO 0.00" PLANING LOCATION	PLANING DEPTH LEFT OF CL CONSTRUCTION AT CL OF CONSTRUCTION		PLANING DEPTH RIGHT OF CL CONSTRUCTION AT CL OF CONSTRUCTION	NUMBER OF FEET FROM CL OF CONSTRUCTION TO 0.00" PLANING LOCATION	PLANING DEPTH AT SAW CUT ALONG PAVEMENT RECONSTRUCTION	PLANING DEPTH ALONG EDGE OF PAVEMENT	PLANING DEPTH ALONG EDGE OF SHOULDER
1331+00.00	MATCH INTO THE RESURFACING PROJECT										
1331+25.00	NEW	NEW	0.24	-	-	0.23	-	-	-	0.20	0.29
1331+50.00	NEW	NEW	0.26	-	-	0.23	-	-	-	0.19	0.26
1331+75.00	NEW	NEW	0.21	-	-	0.18	-	-	-	0.14	0.12
1332+00.00	NEW	NEW	0.05	-	-	0.08	-	-	-	0.09	0.08
1332+07.99	NEW	NEW	-	8.48	-	0.06	-	-	-	0.08	-
1332+25.00	NEW	NEW	-	3.57	-	0.05	-	-	-	0.03	-
1332+58.71	NEW	NEW	-	-	-	-	-	-	-	NEW	NEW
1332+75.00	NEW	NEW	-	-	-	-	-	-	-	NEW	NEW
1333+00.00	NEW	NEW	0.06	-	-	0.04	-	-	-	NEW	NEW
1333+25.00	NEW	NEW	0.19	-	-	0.38	-	-	0.12	NEW	NEW
1333+50.00	NEW	NEW	0.30	-	-	0.26	-	10.36	-	NEW	NEW
1333+75.00	NEW	NEW	0.18	-	0.08	←→	0.33	-	0.06	NEW	NEW
1334+00.00	0.27	0.16	-	0.83	0.00	←→	0.24	10.47	-	NEW	NEW
1334+25.00	0.21	0.07	-	4.72	0.00	←→	0.20	9.78	-	NEW	NEW
1334+50.00	0.13	0.17	-	4.22	0.00	←→	0.19	8.35	-	NEW	NEW
1334+75.00	0.29	0.20	-	4.35	0.00	←→	0.15	6.47	-	NEW	NEW
1335+00.00	0.29	0.17	-	5.12	0.00	←→	0.11	4.12	-	NEW	NEW
1335+25.00	0.31	0.18	-	5.29	0.00	←→	0.10	4.39	-	NEW	NEW
1335+50.00	0.30	0.27	-	3.25	0.00	←→	0.15	5.73	-	NEW	NEW
1335+75.00	0.36	0.30	-	2.58	0.00	←→	0.17	6.33	-	NEW	NEW
1336+00.00	0.37	0.24	-	3.25	0.00	←→	0.17	7.27	-	NEW	NEW
1336+25.00	0.39	0.23	-	3.42	0.00	←→	0.15	7.42	-	NEW	NEW
1336+50.00	0.31	0.22	-	4.29	0.00	←→	0.13	6.81	-	NEW	NEW
1336+75.00	0.28	0.18	-	3.83	0.00	←→	0.16	6.22	-	NEW	NEW
1337+00.00	0.19	0.19	-	1.43	0.00	←→	0.22	9.67	-	NEW	NEW
1337+25.00	NEW	NEW	0.44	-	0.10	←→	0.35	-	0.14	NEW	NEW
1337+50.00	NEW	NEW	0.20	-	-	0.13	-	8.08	-	NEW	NEW
1337+75.00	NEW	NEW	0.05	-	-	0.07	-	2.55	-	NEW	NEW
1338+00.00	NEW	NEW	-	2.37	-	0.06	-	5.81	-	NEW	NEW
1338+25.00	0.08	-	-	8.92,13.99	-	0.11	-	4.57	-	NEW	NEW
1338+50.00	0.08	-	-	10.53,12.80	-	0.13	-	-	0.06	NEW	NEW
1338+75.00	0.23	0.09	-	-	-	0.12	-	-	0.09	NEW	NEW
1339+00.00	0.32	0.14	-	-	-	0.15	-	-	0.11	NEW	NEW
1339+23.65	0.38	0.19	-	-	-	0.26	-	-	-	0.21	0.28
1339+50.00	0.41	0.25	-	-	-	0.34	-	-	-	0.17	0.06
1339+75.00	MATCH INTO THE RESURFACING PROJECT										

PLANING DEPTH DETAILS

HUR-20-16.35
LOR-20-0.00

NEW = PROPOSED NEW PAVEMENT
- = N/A



HORIZONTAL SCALE: 1" = 40'

CALCULATED SJD

CHECKED BAD

885						871.33														885	
880	NOTE: PROFILE IS ALONG PROPOSED LEFT EDGE LINE (12' LEFT) OF THE CENTERLINE OF CONSTRUCTION																				880
875																					875
870																					870
865																					865
860																					860
855																					855
850																					850
	871.89	871.62	871.40	871.19	870.96	871.04	871.73	872.21	872.05	871.95	871.84										
	1330+00		1331+00		1332+00		1333+00		1334+00		1335+00										

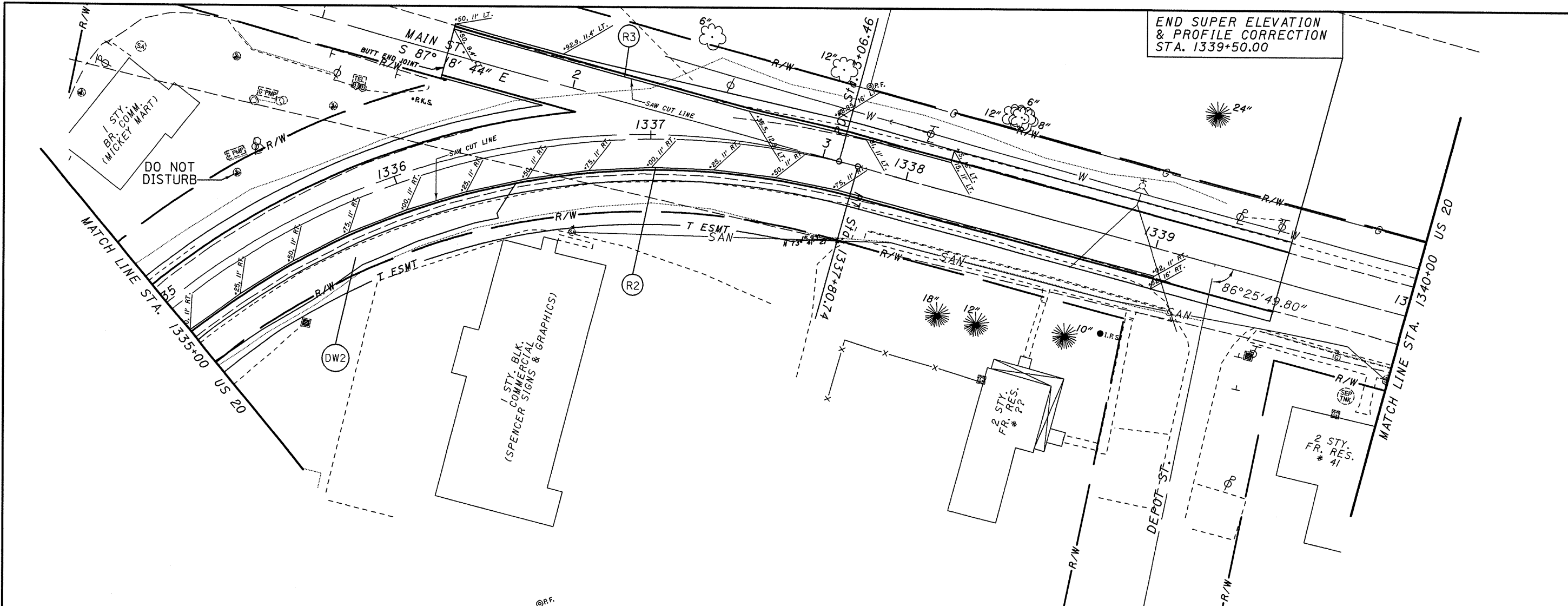
PLAN AND PROFILE

US 20 STA. 1330+00 TO STA. 1335+00

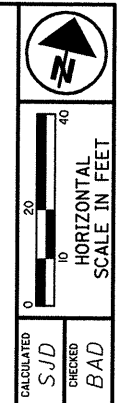
HUR-20-16.35

LOR-20-0.00

I:\projects\77284\77284CP004.dgn
 DATE: 10/19/00



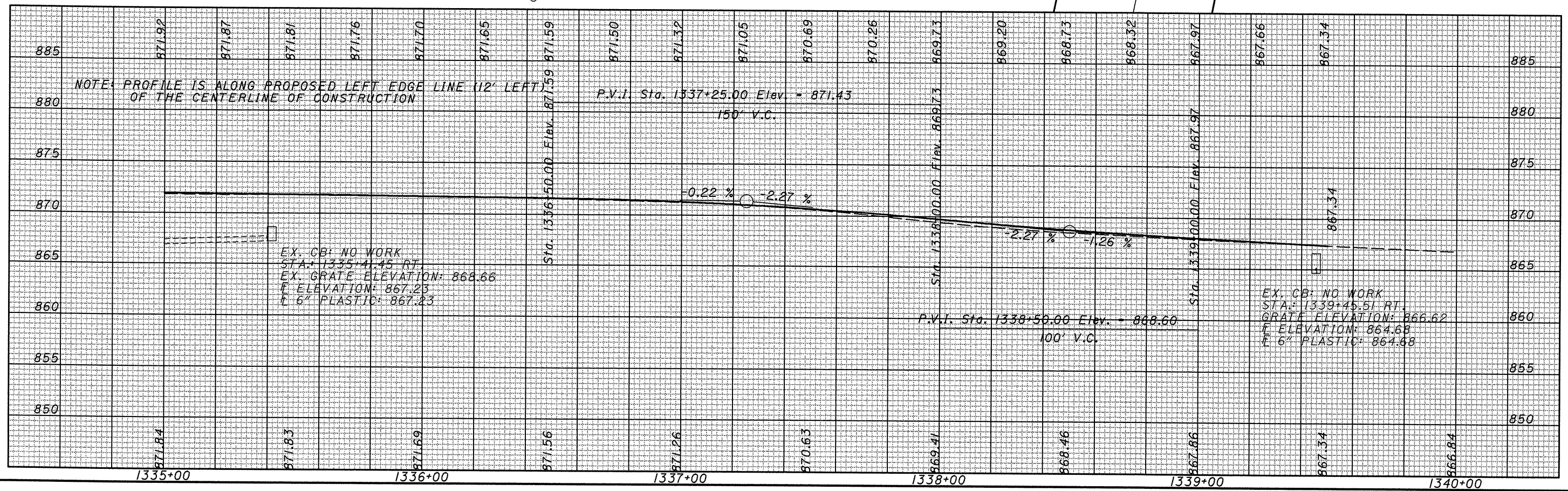
END SUPER ELEVATION
 & PROFILE CORRECTION
 STA. 1339+50.00



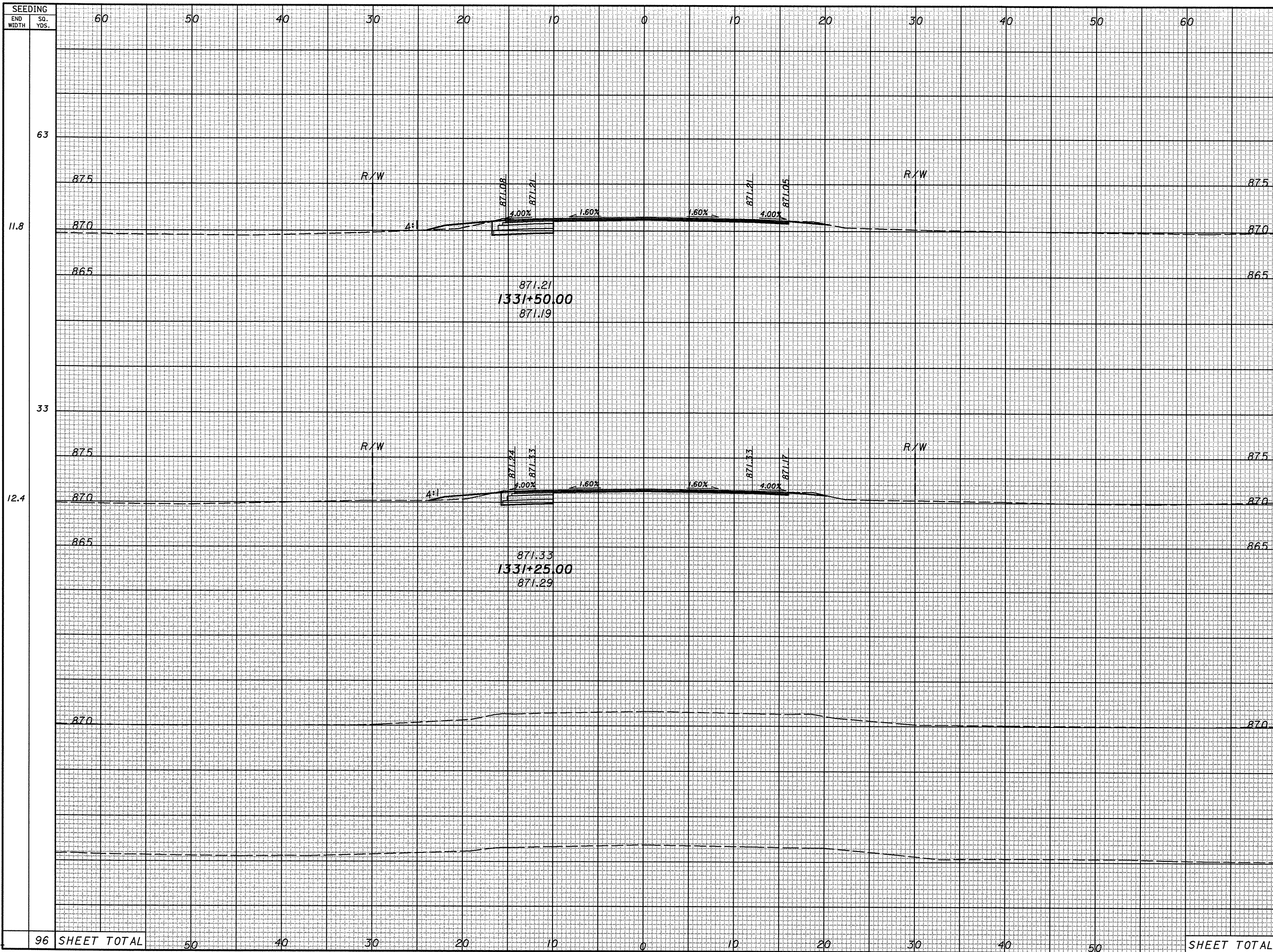
PLAN AND PROFILE
 US 20 STA. 1335+00 TO STA. 1340+00

HUR-20-16.35
 LOR-20-0.00

59
 107



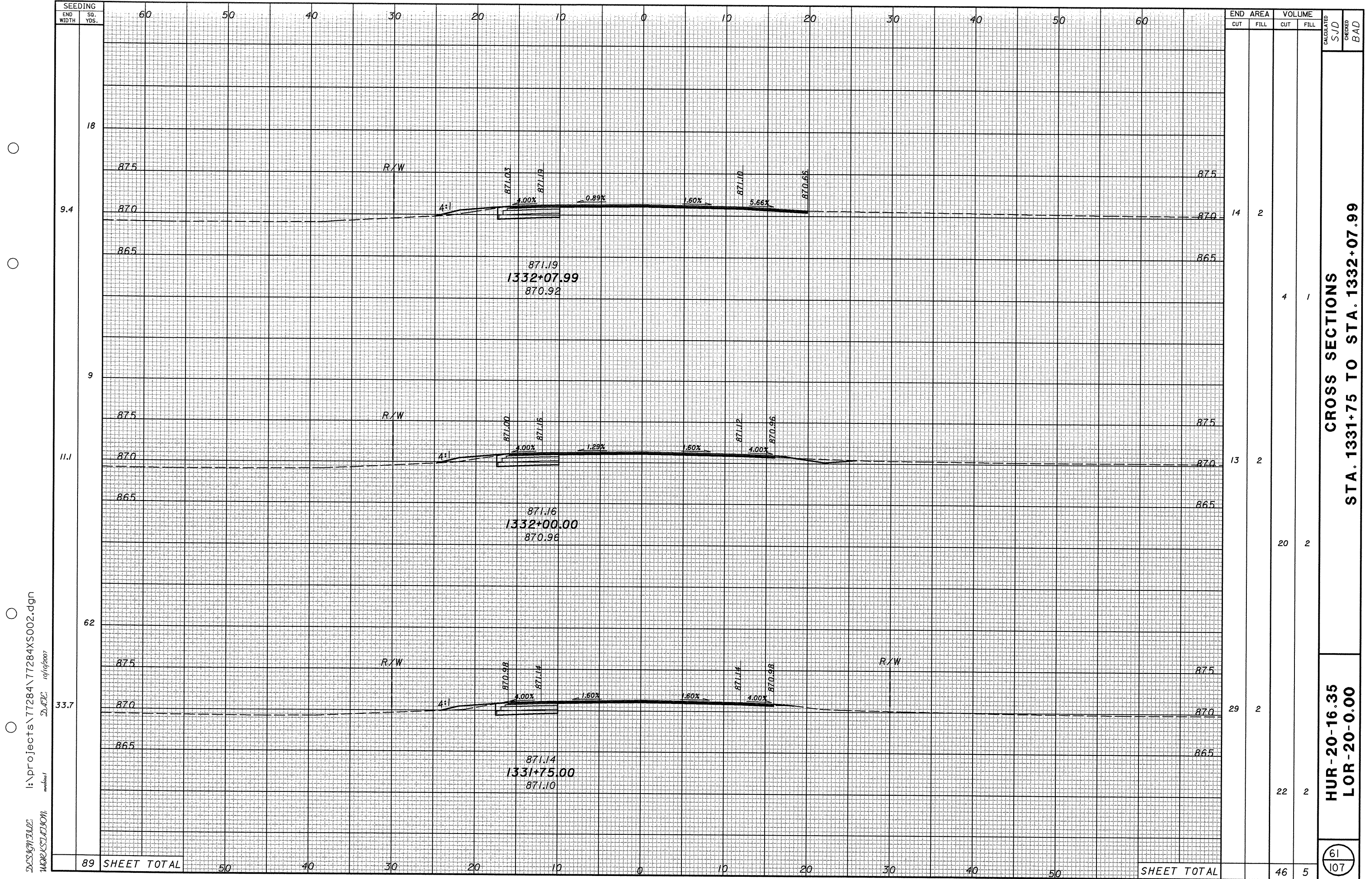
DESIGN FILE: I:\projects\77284\77284XS002.dgn
 WORKSHEET: DWG: 10/10/2007



SEEDING END WIDTH	SQ. YDS.	END AREA		VOLUME		CALCULATED SJD	CHECKED BAD										
		CUT	FILL	CUT	FILL												
63																	
11.8				17	2												
						15	2										
33																	
12.4				16	2												
						0	0										
96	SHEET TOTAL	50	40	30	20	10	0	10	20	30	40	50	SHEET TOTAL	15	2		

**CROSS SECTIONS
 STA. 1330+50 TO STA. 1331+50**

**HUR-20-16.35
 LOR-20-0.00**



SEEDING
END WIDTH SO. YDS.

END AREA VOLUME
CUT FILL CUT FILL
CALCULATED SJD CHECKED BAD

STATION	END WIDTH	SO. YDS.	SEEDING	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1332+07.99	60	18		14	2		
1332+00.00	60	9		13	2		
1331+75.00	60	62		29	2		
SHEET TOTAL	50	40	30	22	2	46	5

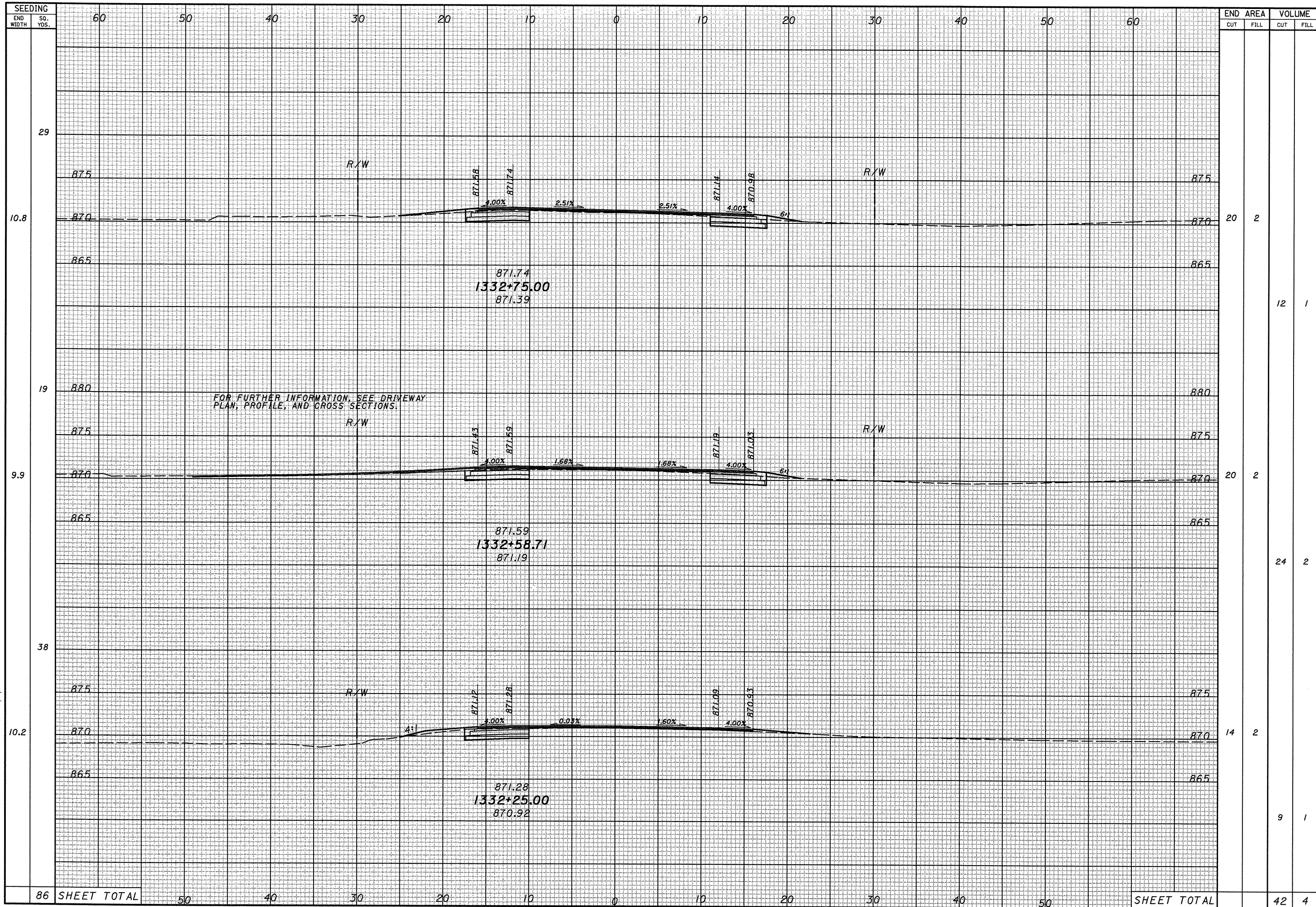
CROSS SECTIONS
STA. 1331+75 TO STA. 1332+07.99

HUR-20-16.35
LOR-20-0.00

61
107

I:\projects\7284\7284XS002.dgn
DATE: 10/10/2007
DRAWN BY: MURKINSON

I:\projects\71284\71284XS002.dgn
 DWG: 10/10/2007
 mch

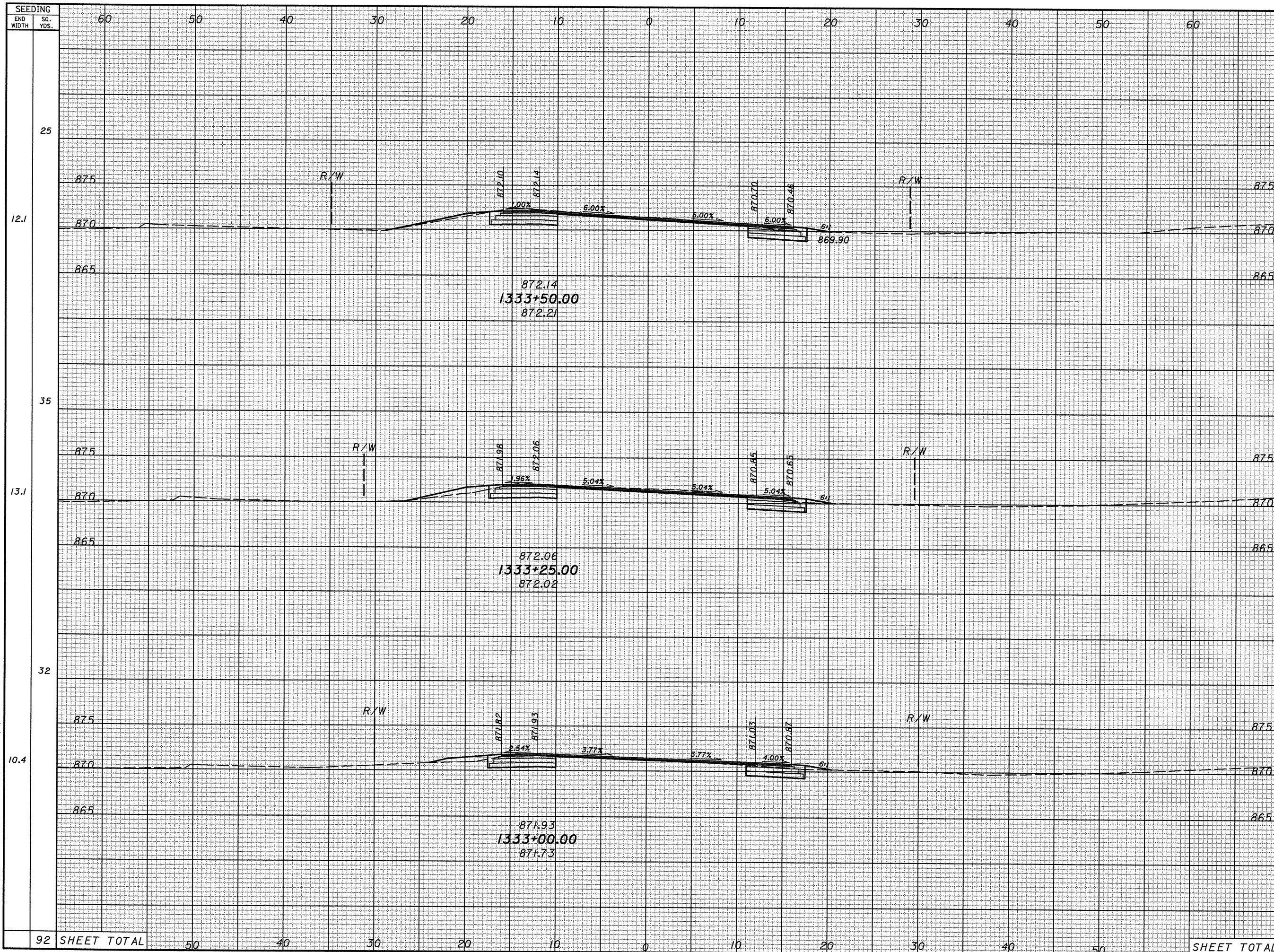


SEEDING	END AREA		VOLUME		CALCULATED SJD	CHECKED BAD											
	CUT	FILL	CUT	FILL													
29																	
10.8		2															
			12	1													
19																	
9.9		2															
			24	2													
38																	
10.2		2															
			9	1													
86	SHEET TOTAL	50	40	30	20	10	0	10	20	30	40	50	SHEET TOTAL	42	4		

CROSS SECTIONS
 STA. 1332+25 TO STA. 1332+75

HUR-20-16.35
 LOR-20-0.00

PROJECT: I:\projects\7284\7284XS002.dgn
 DATE: 10/10/07
 DRAWN BY: [signature]



SEEDING END WIDTH	SQ. YDS.	END AREA		VOLUME	
		CUT	FILL	CUT	FILL
12.1		25	2		
13.1		28	4		
10.4		21	3		
92	SHEET TOTAL	50	40	30	20
				67	8

CROSS SECTIONS
STA. 1333+00 TO STA. STA. 1333+50

HUR-20-16.35
LOR-20-0.00

CALCULATED: SJD
 CHECKED: BAD

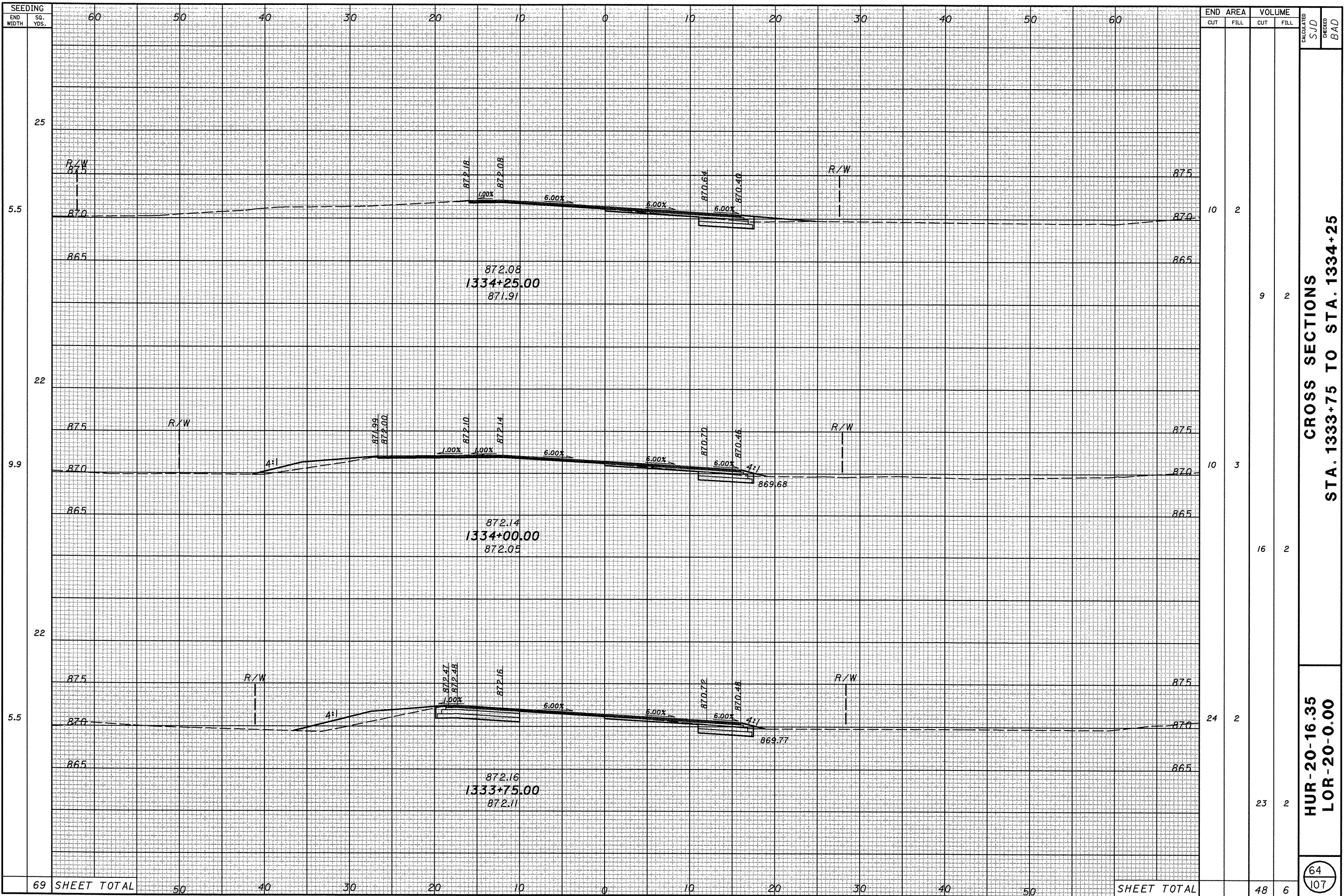
63
 107

I:\projects\77284\77284XS002.dgn

DATE 10/10/00

author

WORKSHEET

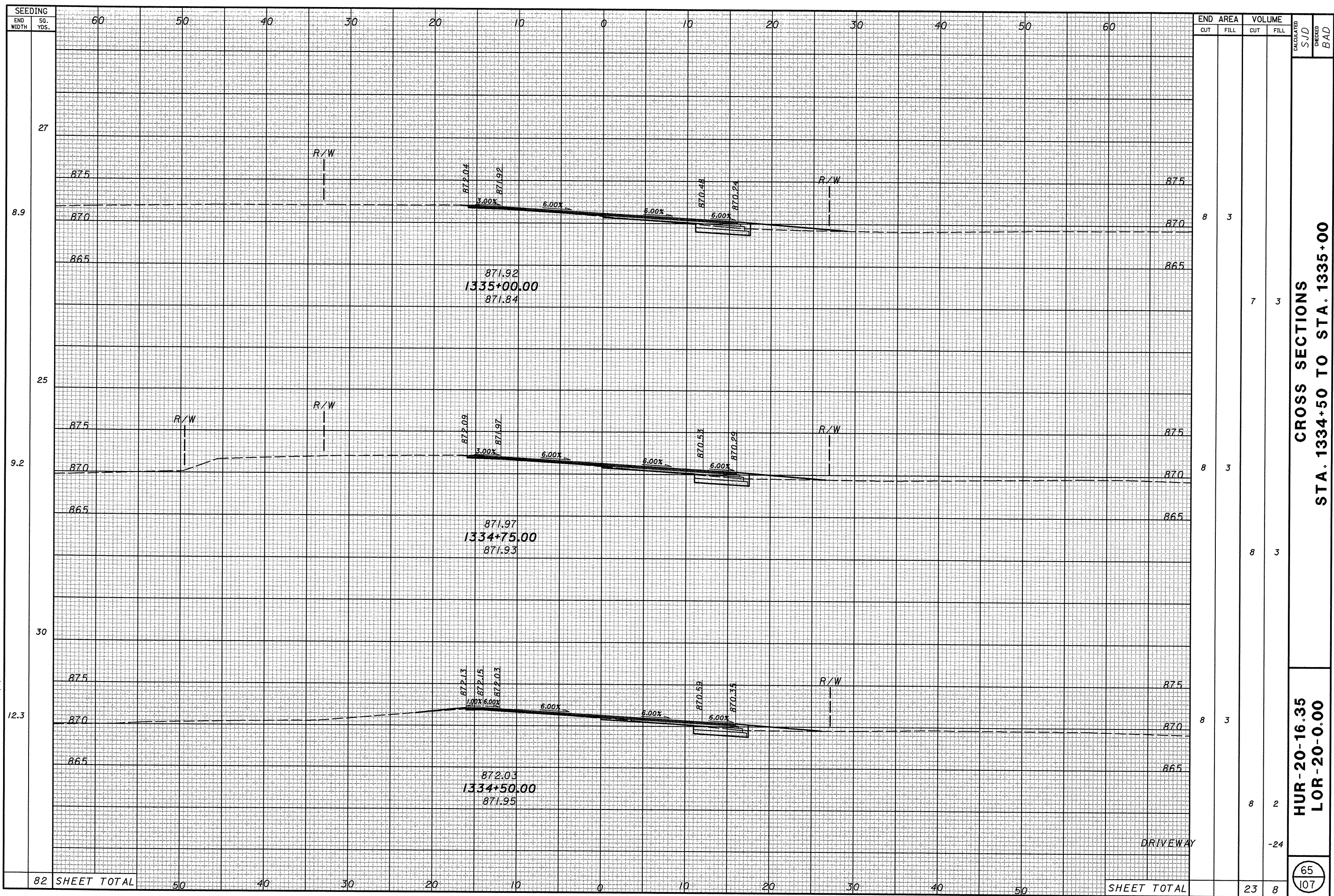


CROSS SECTIONS
STA. 1333+75 TO STA. 1334+25

HUR-20-16.35
LOR-20-0.00

64
107

I:\projects\77284\77284XS002.dgn
 DATE: 10/10/2007
 DWG: 10/10/2007



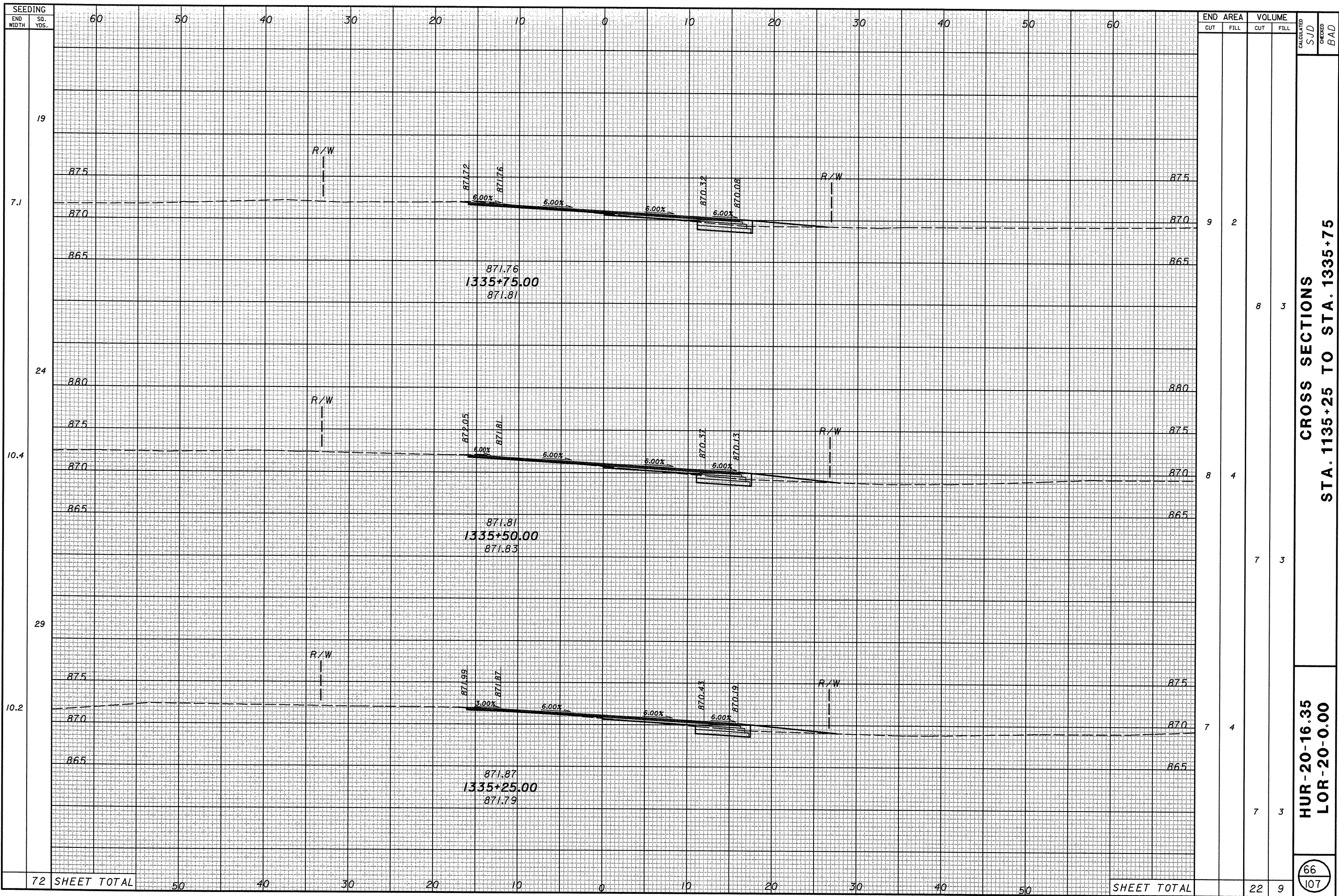
SEEDING		60	50	40	30	20	10	0	10	20	30	40	50	60
END WIDTH	SO. YDS.													
27	8.9													
25	9.2													
30	12.3													
82		SHEET TOTAL	50	40	30	20	10	0	10	20	30	40	50	SHEET TOTAL

END AREA		VOLUME		CALCULATED	CHECKED	BAD
CUT	FILL	CUT	FILL			
8	3					
8	3					
8	3					
8	3					
8	2					
23	8					

CROSS SECTIONS
STA. 1334+50 TO STA. 1335+00
HUR-20-16.35
LOR-20-0.00

65
107

I:\Projects\71284\71284XS002.dgn
 DATE: 10/10/2007
 DWG: 71284XS002.dgn
 MODIFIED: 10/10/2007

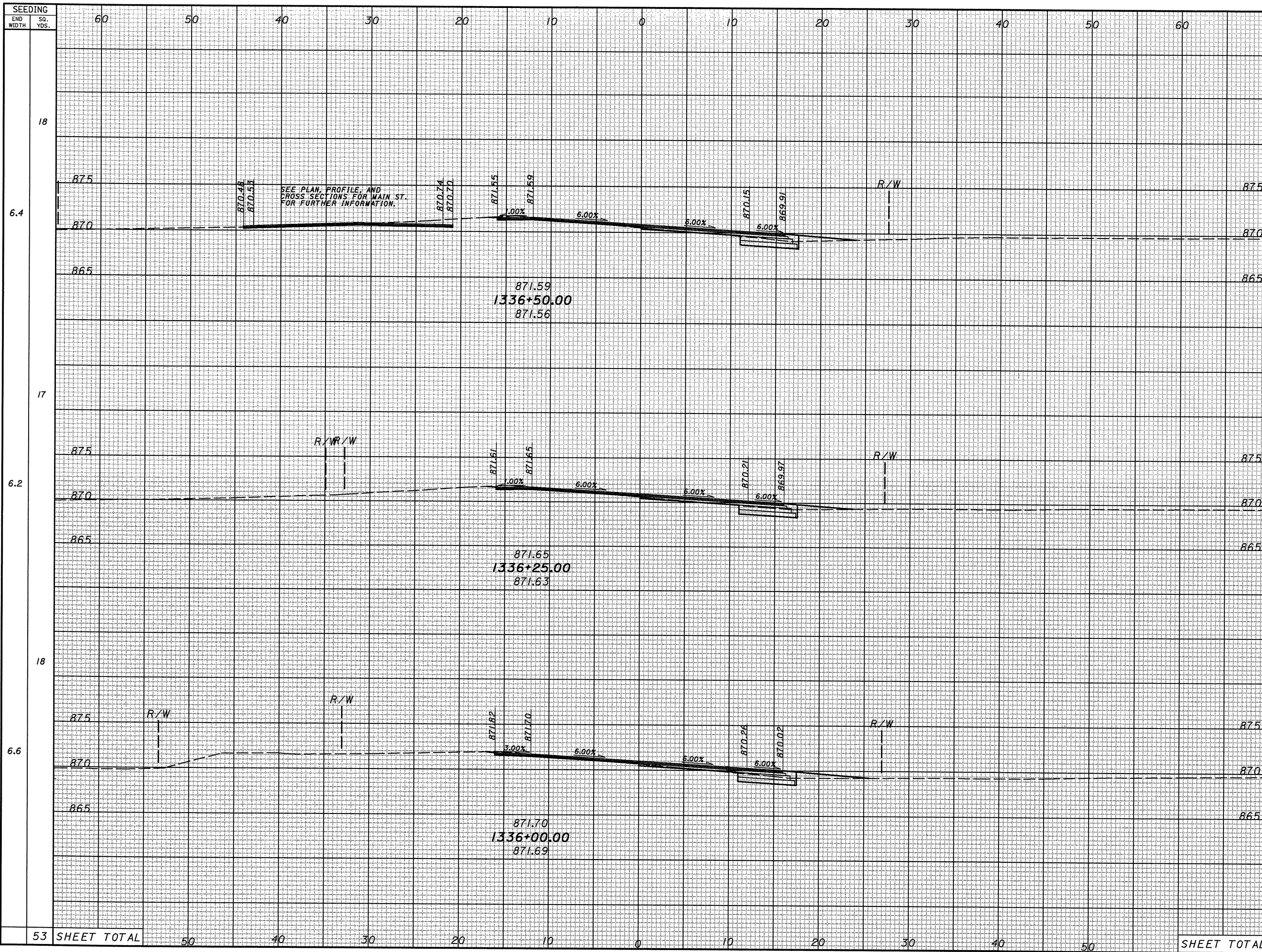


CROSS SECTIONS
 STA. 1135+25 TO STA. 1335+75

HUR-20-16.35
 LOR-20-0.00

66
 107

I:\projects\7284\7284XS002.dgn
 DATE: 10/10/2007
 DWG: 10/10/2007

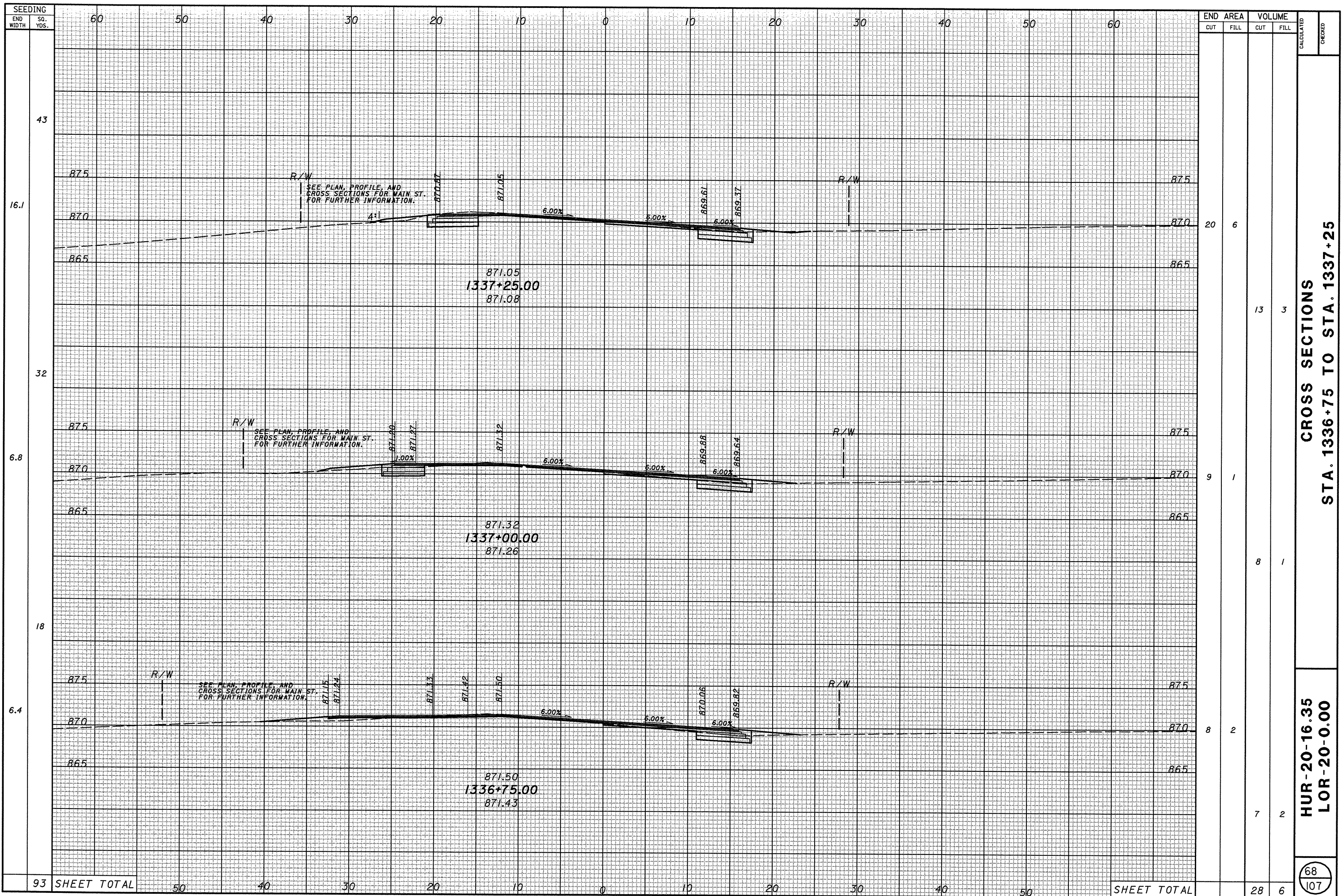


SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED	CHECKED
		CUT	FILL	CUT	FILL		
6.4	60	8	2	8	2		
6.2	60	9	2	8	2		
6.6	60	8	2	8	2		
53	SHEET TOTAL			24	6		

CROSS SECTIONS
 STA. 1336+00 TO STA. 1336+50

HUR-20-16.35
 LOR-20-0.00

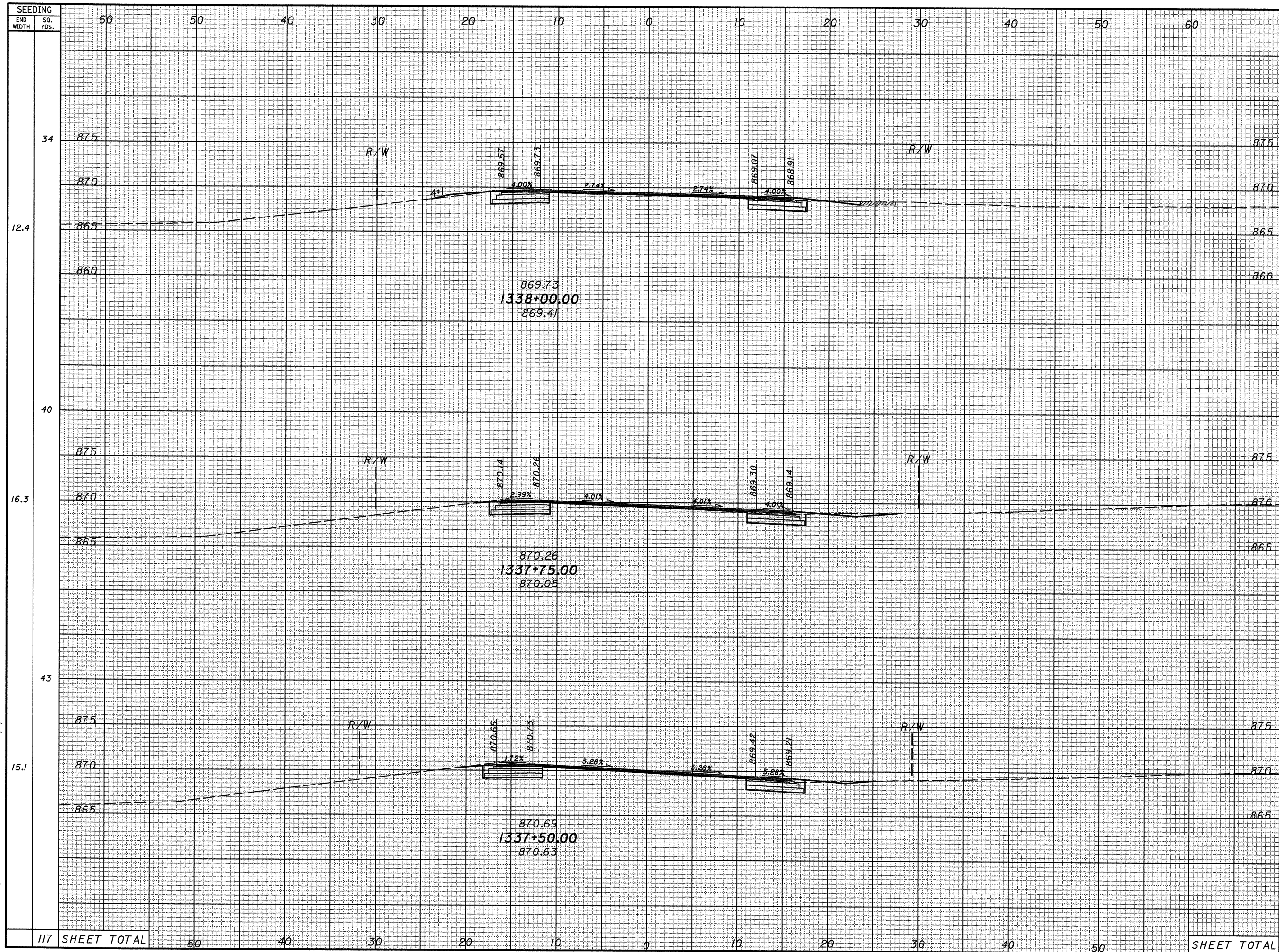
I:\projects\77284\77284XS002.dgn
 DATE: 10/10/2007
 DWG: 10/10/2007



**CROSS SECTIONS
 STA. 1336+75 TO STA. 1337+25**

**HUR-20-16.35
 LOR-20-0.00**

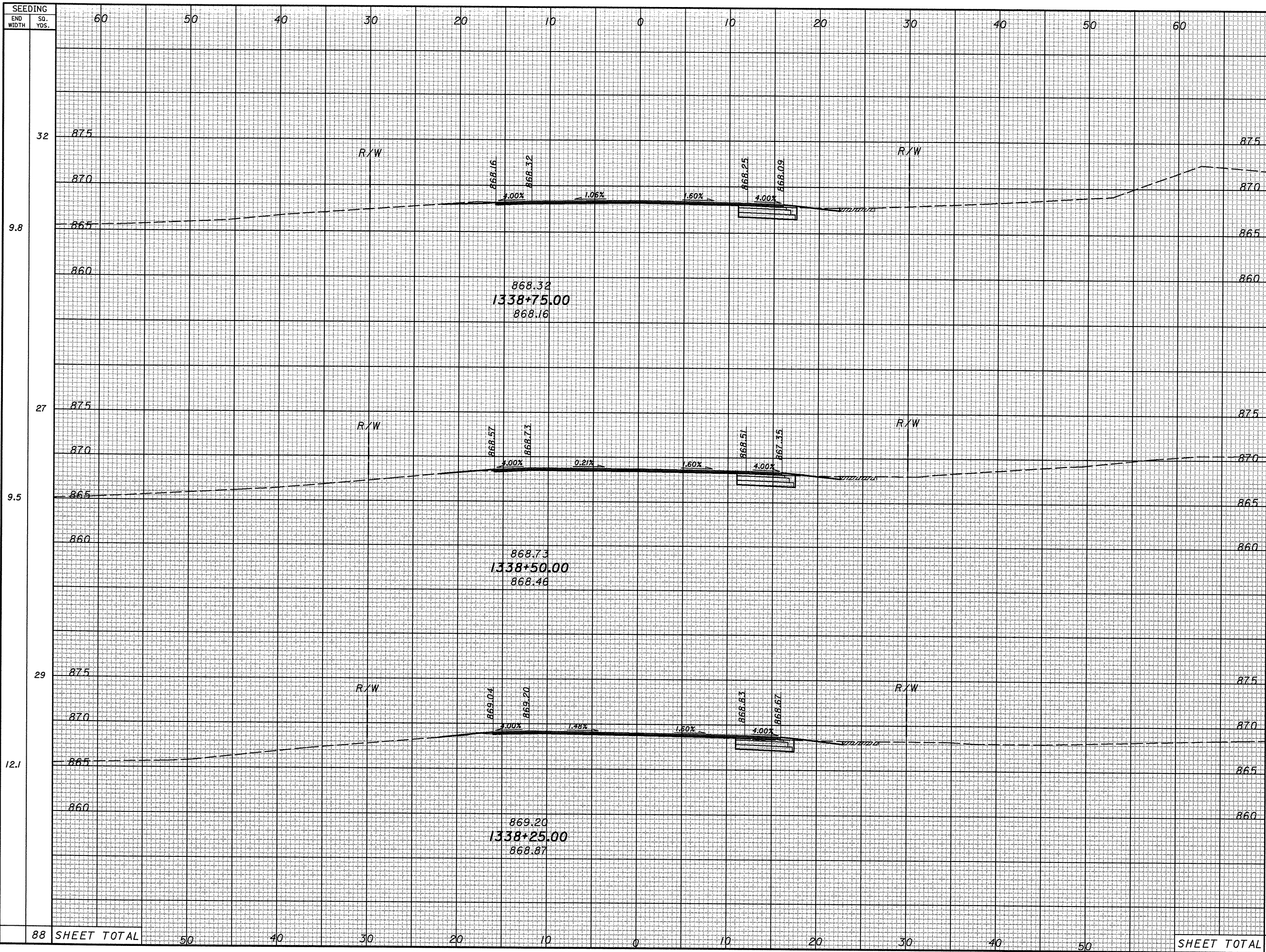
I:\projects\7284\7284XS002.dgn
 DATE: 10/10/2007
 DWG: 10/10/2007



SEEDING END WIDTH SQ. YDS.	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
34				
12.4	21	1		
40				
16.3	24	0		
43				
15.1	25	0		
117 SHEET TOTAL	50	40	65	4

CALCULATED S/D
 CHECKED BAD
CROSS SECTIONS
STA. 1337+50 TO STA. 1338+00
HUR-20-16.35
LOR-20-0.00
 69
 107

I:\projects\7284\7284XS002.dgn
 DWG: 10/10/2007
 mod/



END AREA	VOLUME	
	CUT	FILL
13	0	0
16	0	0
14	0	0
14	1	1
44	1	1

CROSS SECTIONS
STA. 1338+25 TO STA. 1338+75

HUR-20-16.35
LOR-20-0.00

70
107

88 SHEET TOTAL

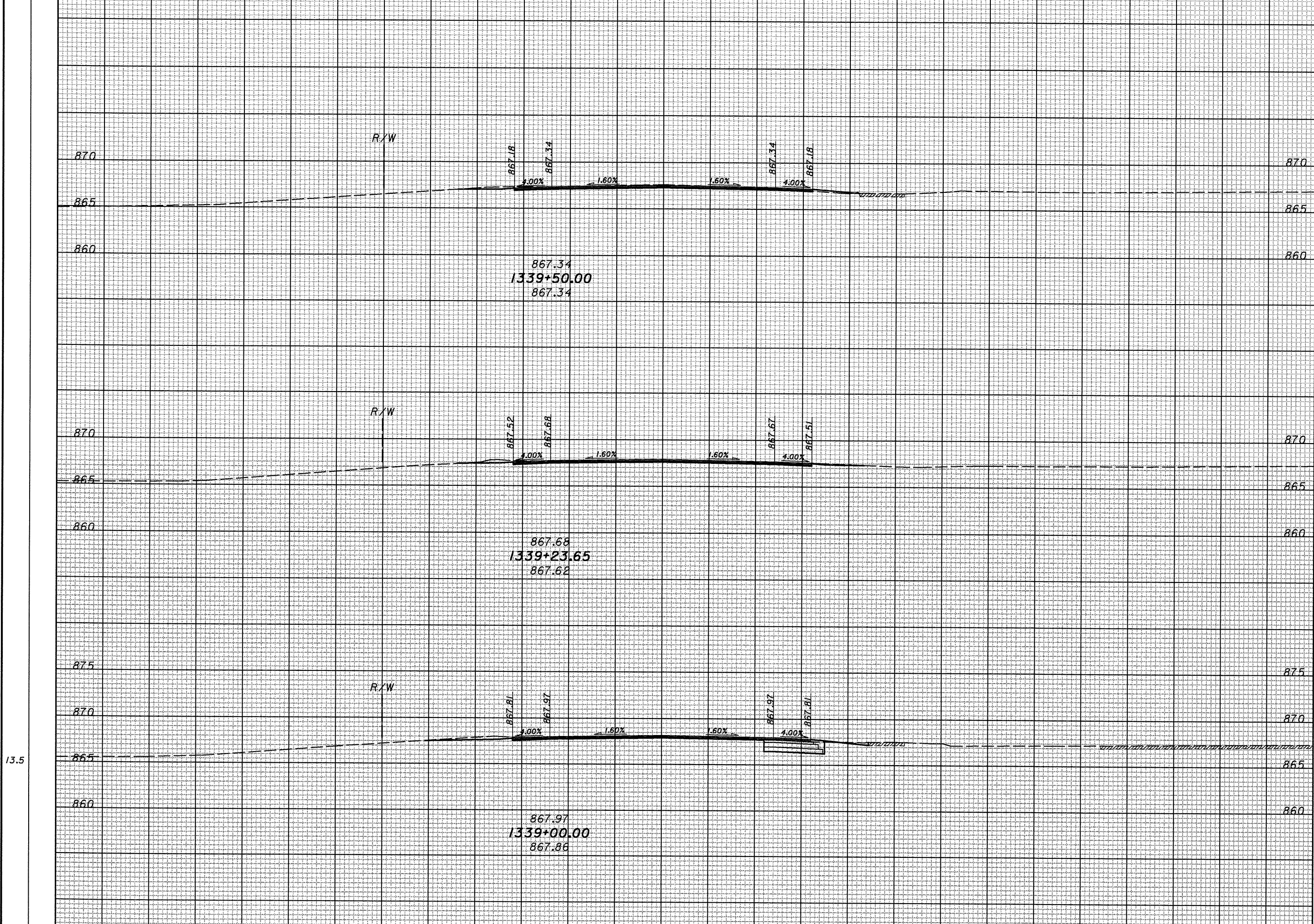
SHEET TOTAL

SEEDING
END WIDTH SQ. YDS.

60 50 40 30 20 10 0 10 20 30 40 50 60

END AREA VOLUME
CUT FILL CUT FILL

CALCULATED
SJD
CHECKED
BAD



END AREA	VOLUME
CUT	FILL
14	0
13	0
13	0

CROSS SECTIONS
STA. 1339+00 TO STA. 1339+50

HUR-20-16.35
LOR-20-0.00

71
107

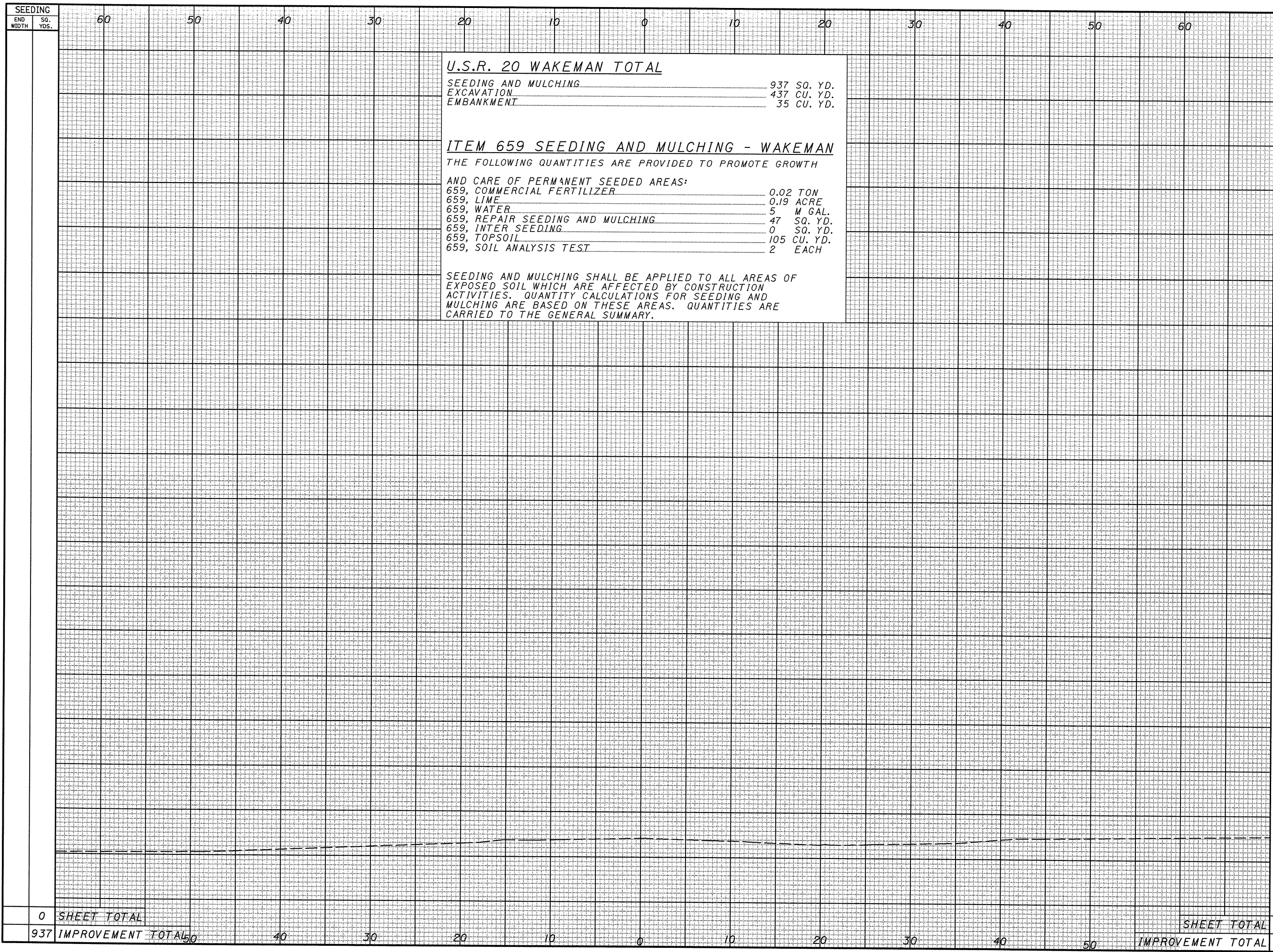
I:\projects\7284\7284XS002.dgn
DATE: 10/10/2007
DRAWN BY: mshar

0 SHEET TOTAL

SHEET TOTAL

50 40 30 20 10 0 10 20 30 40 50

DESIGNER: I:\projects\77284\77284XS002.dgn
 WORKSHEET: DATE: 10/10/2007



U.S.R. 20 WAKEMAN TOTAL
 SEEDING AND MULCHING 937 SQ. YD.
 EXCAVATION 437 CU. YD.
 EMBANKMENT 35 CU. YD.

ITEM 659 SEEDING AND MULCHING - WAKEMAN

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:
 659, COMMERCIAL FERTILIZER 0.02 TON
 659, LIME 0.19 ACRE
 659, WATER 5 M GAL.
 659, REPAIR SEEDING AND MULCHING 47 SQ. YD.
 659, INTER SEEDING 0 SQ. YD.
 659, TOPSOIL 105 CU. YD.
 659, SOIL ANALYSIS TEST 2 EACH

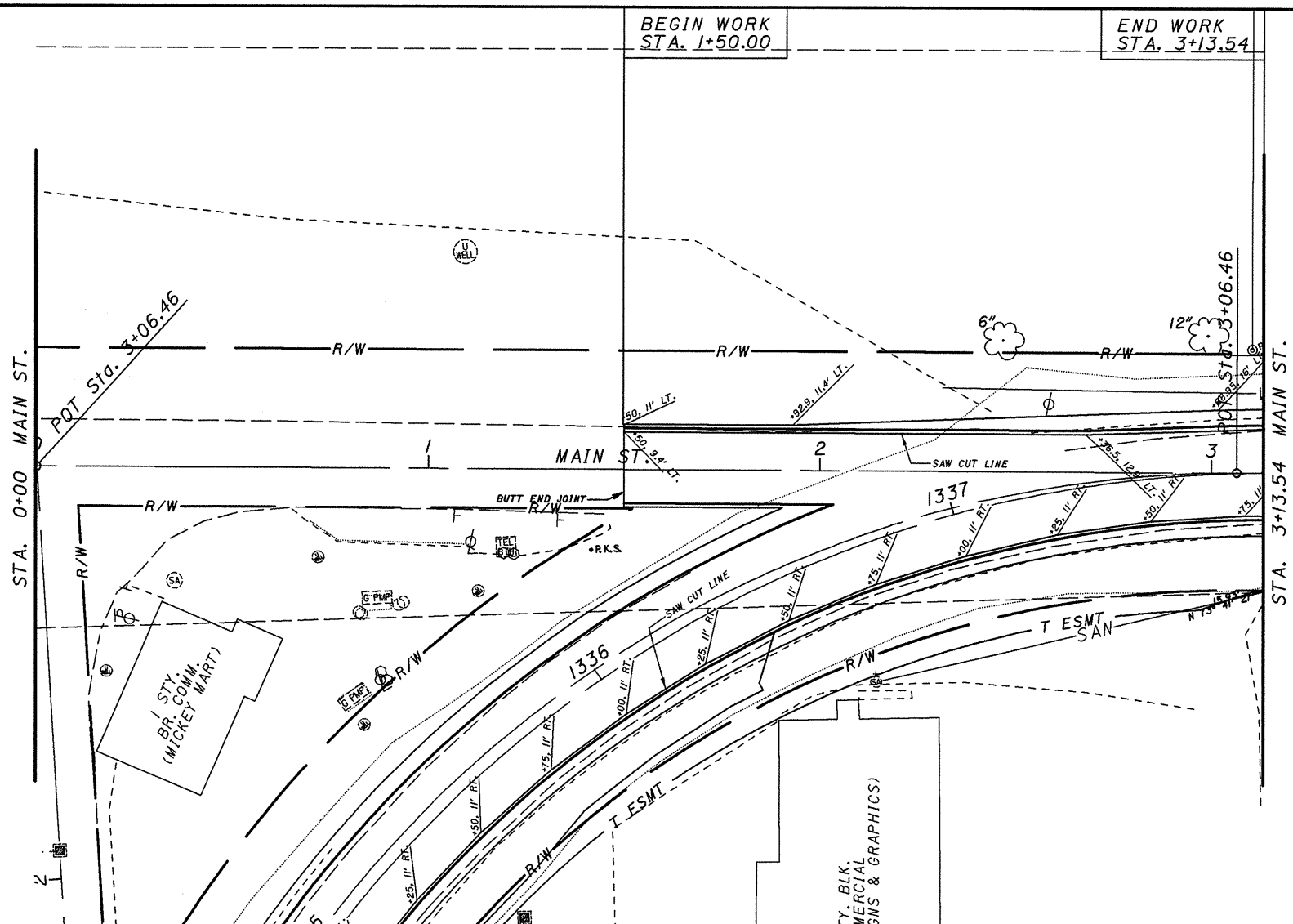
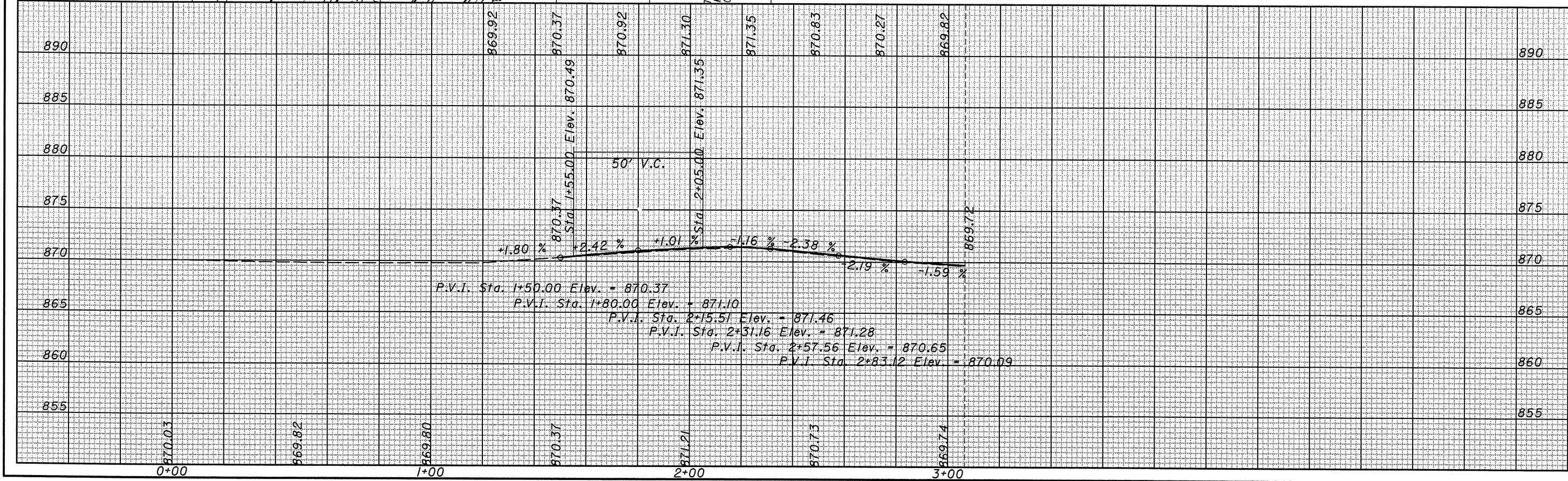
SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL WHICH ARE AFFECTED BY CONSTRUCTION ACTIVITIES. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE AREAS. QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

END AREA		VOLUME		CALCULATED SJD	CHECKED BAD
CUT	FILL	CUT	FILL		
		0	0	72	
		437	59	107	

US 20 CROSS SECTIONS
 STA. 1340+00

HUR-20-16.35
 LOR-20-0.00

I:\projects\77284\77284GP_Si.dgn
 DATE: 10/10/2007



HUR-20-16.35
LOR-20-0.00

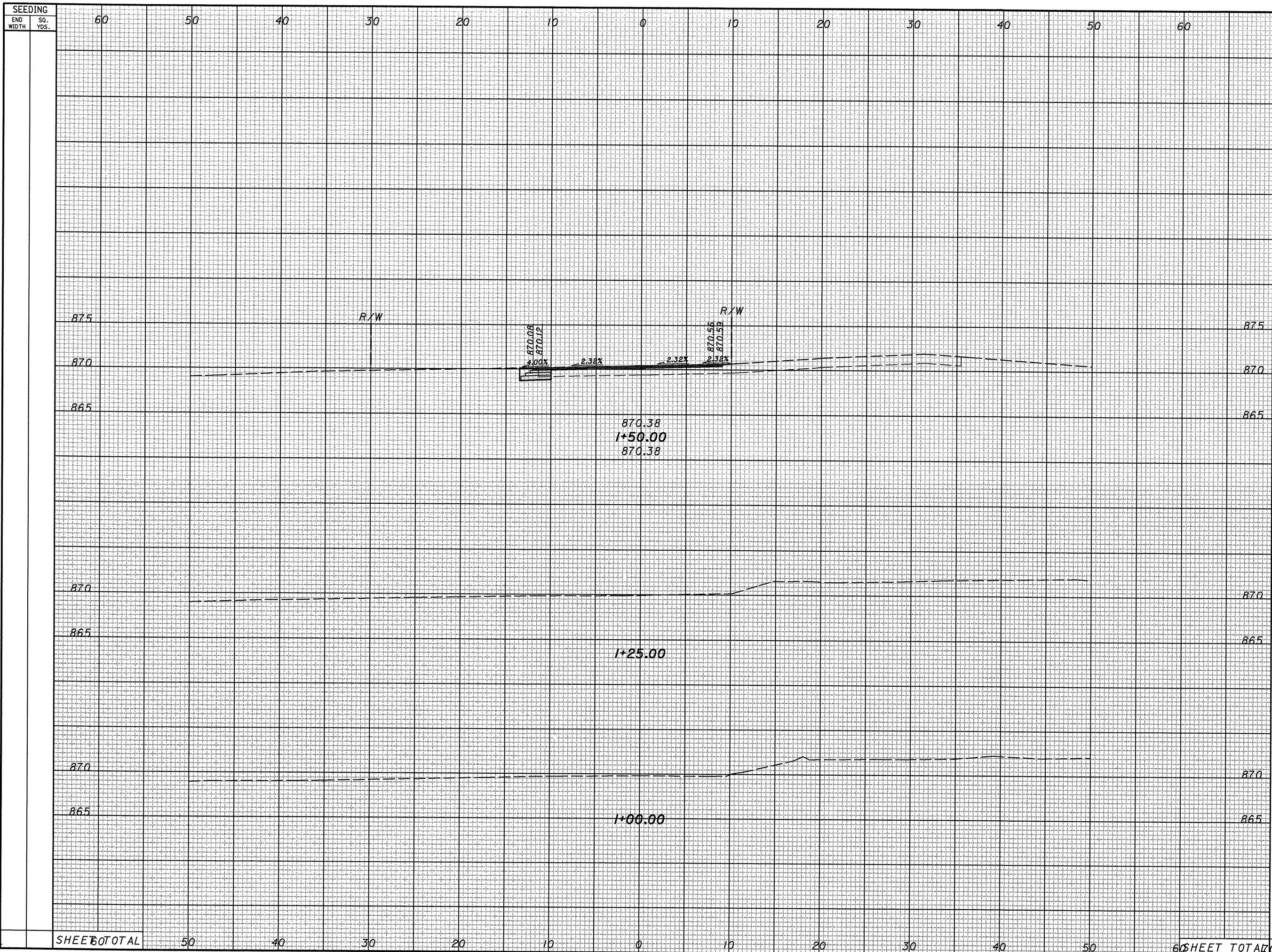
PLAN AND PROFILE - MAIN ST.
STA. 0+00 TO STA. 3+13.54

CALCULATED: SJD
 CHECKED: MJS

0 20 40
 HORIZONTAL SCALE IN FEET

73
107

I:\projects\77284\77284XS004.dgn
 10/10/2007
 DWG



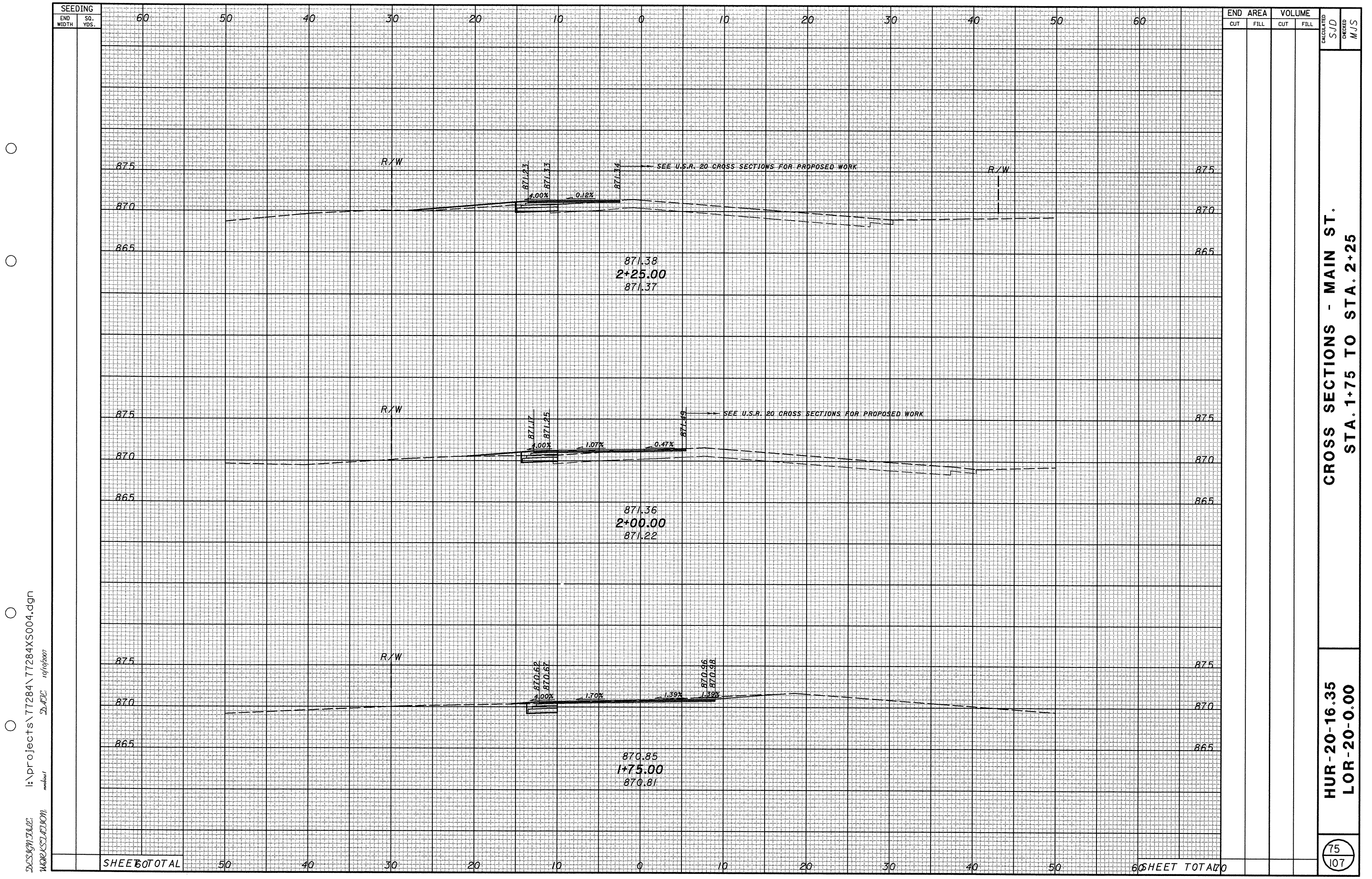
SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL
60					
50					
40					
30					
20					
10					
0					
10					
20					
30					
40					
50					
60					
SHEET TOTAL		50	40	30	20
SHEET TOTAL		50	40	30	20

CALCULATED SJD
 CHECKED MJS

HUR-20-16.35
LOR-20-0.00

CROSS SECTIONS - MAIN ST.
STA. 1+00 TO STA. 1+50

74
 107



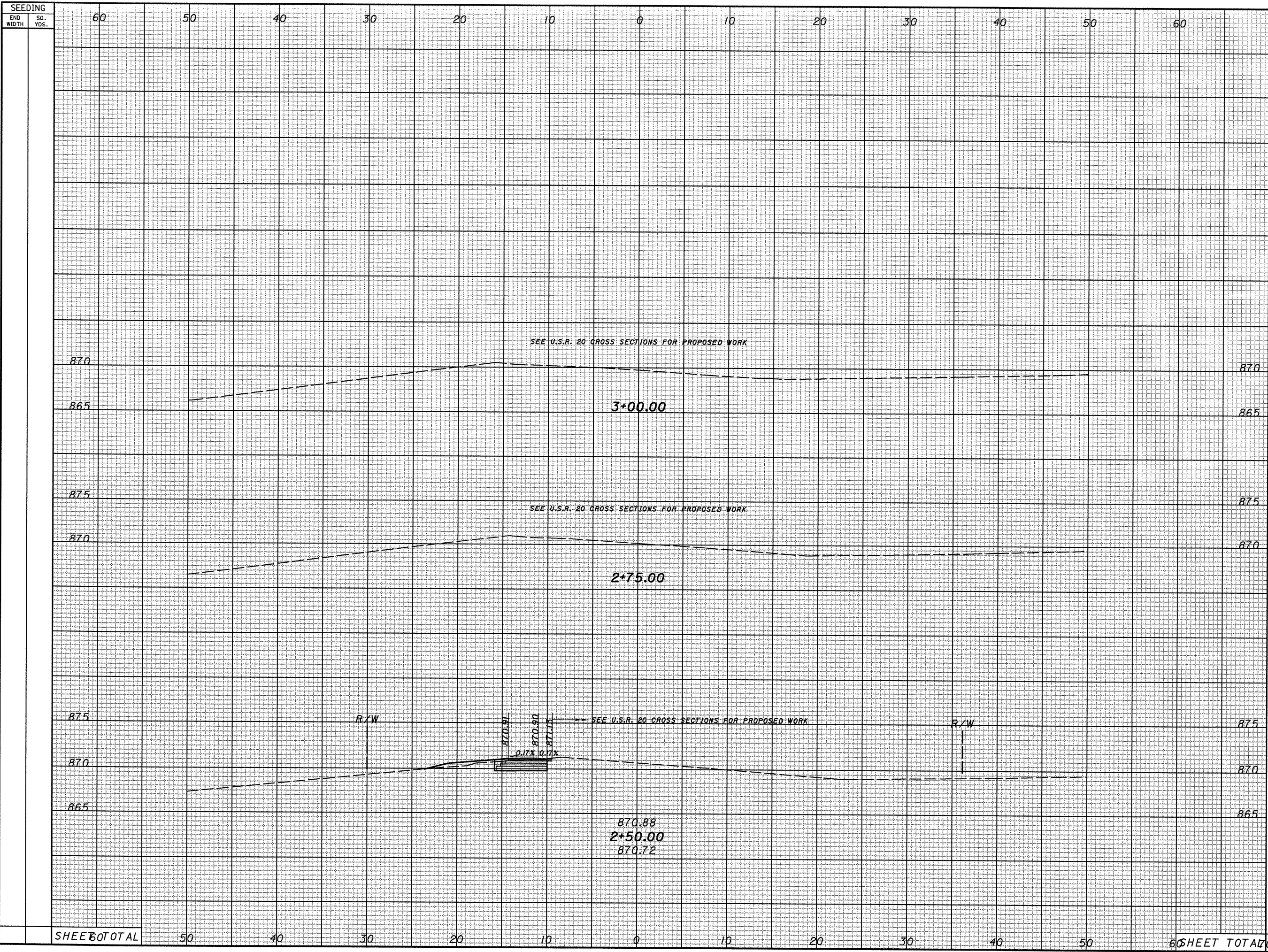
I:\projects\77284\77284XS004.dgn
 DATE: 10/10/2007
 DWG: 77284XS004.dwg
 DESIGNED BY: [unintelligible]
 CHECKED BY: [unintelligible]

SHEET TOTAL 50 40 30 20 10 0 10 20 30 40 50 60 SHEET TOTAL 70

END CUT	AREA CUT	END FILL	AREA FILL	VOLUME		CALCULATED SJD	CHECKED MJS
				CUT	FILL		

CROSS SECTIONS - MAIN ST.
 STA. 1+75 TO STA. 2+25

HUR-20-16.35
 LOR-20-0.00



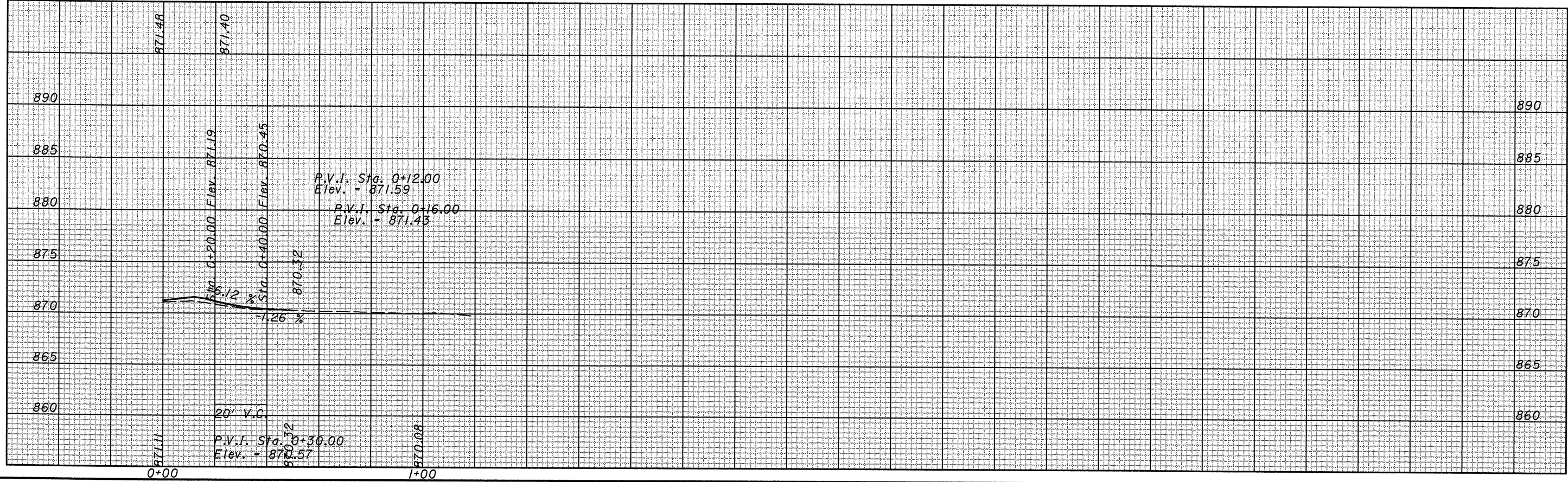
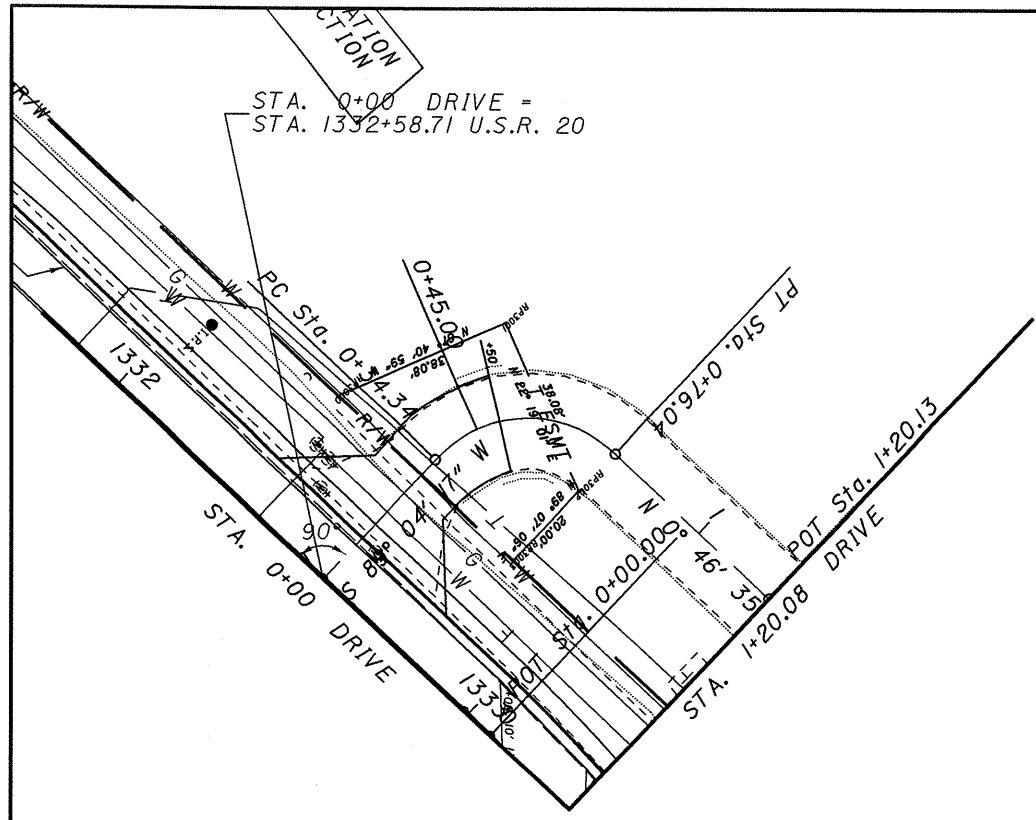
END WIDTH	AREA CUT	AREA FILL	VOLUME		CALCULATED S/D	CHECKED MJS
			CUT	FILL		
60						
50						
40						
30						
20						
10						
0						
10						
20						
30						
40						
50						
60						
SEE U.S.R. 20 CROSS SECTIONS FOR PROPOSED WORK						
870						
865						
3+00.00						
875						
870						
SEE U.S.R. 20 CROSS SECTIONS FOR PROPOSED WORK						
2+75.00						
875						
870						
865						
SEE U.S.R. 20 CROSS SECTIONS FOR PROPOSED WORK						
R/W						
870.88						
870.90						
870.72						
0.17% 0.17%						
16.00						
1.72						
SEE U.S.R. 20 CROSS SECTIONS FOR PROPOSED WORK						
R/W						
870.88						
870.90						
870.72						
2+50.00						
SHEET TOTAL						
50						
40						
30						
20						
10						
0						
10						
20						
30						
40						
50						
60						
SHEET TOTAL						

I:\projects\7284\7284XS004.dgn
 10/10/2007
 2:42:00
 10/10/2007

CROSS SECTIONS - MAIN ST.
 STA. 2+50 TO STA. 3+00

HUR-20-16.35
 LOR-20-0.00

DESIGNER: I:\projects\7284\7284GP_DR.dgn
 MORSE/BJO/M
 DATE: 10/10/2007



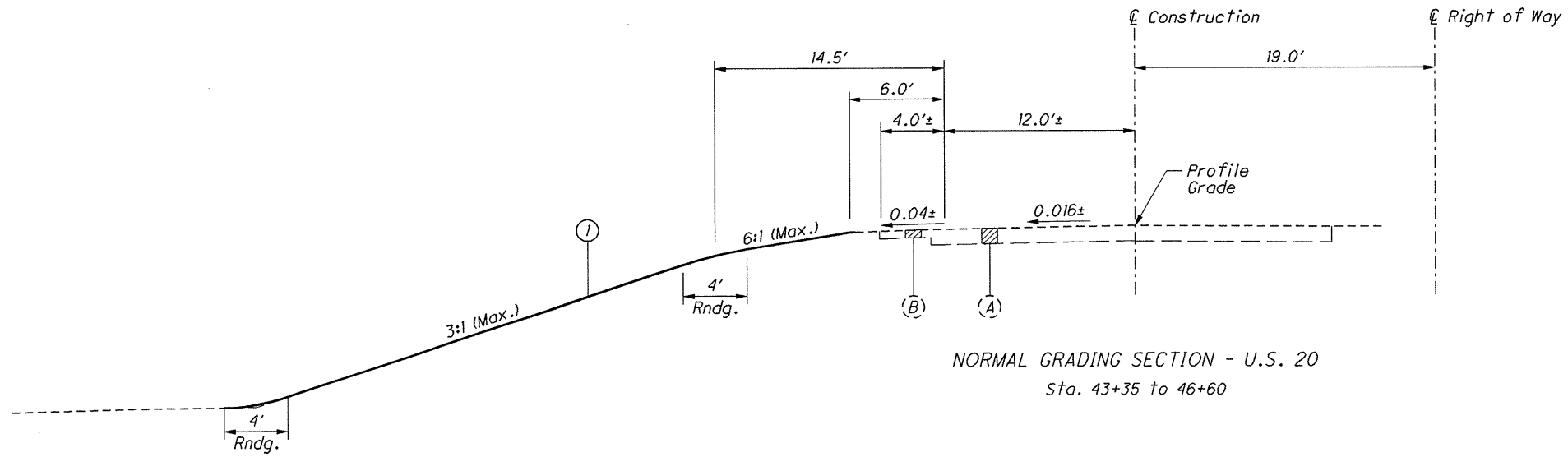
PLAN AND PROFILE - DRIVEWAY
STA. 0+00 TO STA. 1+20.08

HUR-20-16.35
 LOR-20-0.00

77
107

CALCULATED SJD
 CHECKED MJS

0 10 20
 HORIZONTAL
 SCALE IN FEET



NORMAL GRADING SECTION - U.S. 20
 Sta. 43+35 to 46+60

LEGEND

- ① ITEM 659 - Seeding and Mulching
- (A) 9"± Asphalt over 7"± Reinforced Concrete
- (B) 6"± Asphalt

DESIGN FILE: I:\projects\77284\Struct\LOR20_0270\sheets\77284GN001.dgn
WORKSTATION: hyaryah DATE: 10/10/2007

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN

EXISTING PLANS

EXISTING PLANS ENTITLED LOR-20-1.66 (CONSTRUCTION YEAR 1939) MAY BE INSPECTED IN THE ODOT DISTRICT 3 OFFICE IN ASHLAND.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

GAS Columbia Gas of Ohio 3101 North Ridge Road East Lorain, Ohio 44055 440-240-6123	TELEPHONE Verizon 83 Townsend Avenue Norwalk, Ohio 44857 419-706-3775
--	--

ELECTRIC Lorain-Medina Rural Electric P.O. Box 158 Wellington, Ohio 44090 800-222-5673	CABLE GLW Broadband 993 Commerce Drive Grafton, Ohio 44044 440-926-3230
---	--

WATER
Rural Lorain County Water Authority
42401 S.R. 303, P.O. Box 567
LaGrange, Ohio, 44050
440-355-6060

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

ITEM 201 - CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 659 - SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

- 659, SOIL ANALYSIS TEST - 2 EACH
- 659, TOPSOIL - 147 CU YD
(111 CU YD/1000 SQ YD)(1327 SQ YD) = 147.30 CU YD
- 659, SEEDING AND MULCHING - 1327 SQ YD
- 659, REPAIR SEEDING AND MULCHING - 66 SQ YD
(0.05)(1327 SQ YD) = 66.35 SQ YD
- 659, COMMERCIAL FERTILIZER - 0.18 TON
(1 TON/7410 SQ YD)(1327 SQ YD) = 0.18 TON
- 659, LIME - 0.27 ACRE
(1 ACRE/4840 SQ YD)(1327 SQ YD) = 0.27 ACRE
- 659, WATER - 7 M GAL
(0.0054 M GAL/1 SQ YD)(1327 SQ YD) = 7.17 M GAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS. QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

ITEM 614, MAINTAINING TRAFFIC

AT STRUCTURE LOR-20-0272, ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT EXCEPT THAT CLOSURE OF ONE LANE MAY OCCUR DURING SHOULDER WORK WITH MINOR ENCROACHMENT AS PER STANDARD DRAWING MT-97.10. WORK TIME RESTRICTIONS APPEARING ELSEWHERE IN THE PLANS APPLY TO THIS LOCATION AS WELL.

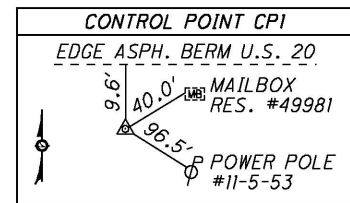
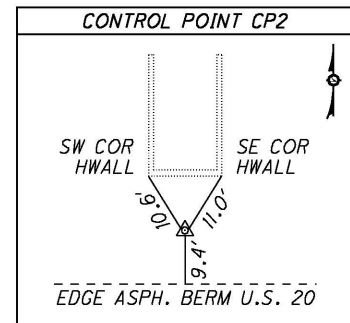
ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

CALCULATED
HYH
CHECKED
DCM

GENERAL NOTES FOR STRUCTURE LOR-20-0272

HUR-20-16.35
LOR-20-0.00

THE GPS COORDINATE DATA INFORMATION FOR THE BENCHMARKS, CONTROL POINTS AND CENTERLINE WILL BE PROVIDED AT THE PRECONSTRUCTION MEETING.

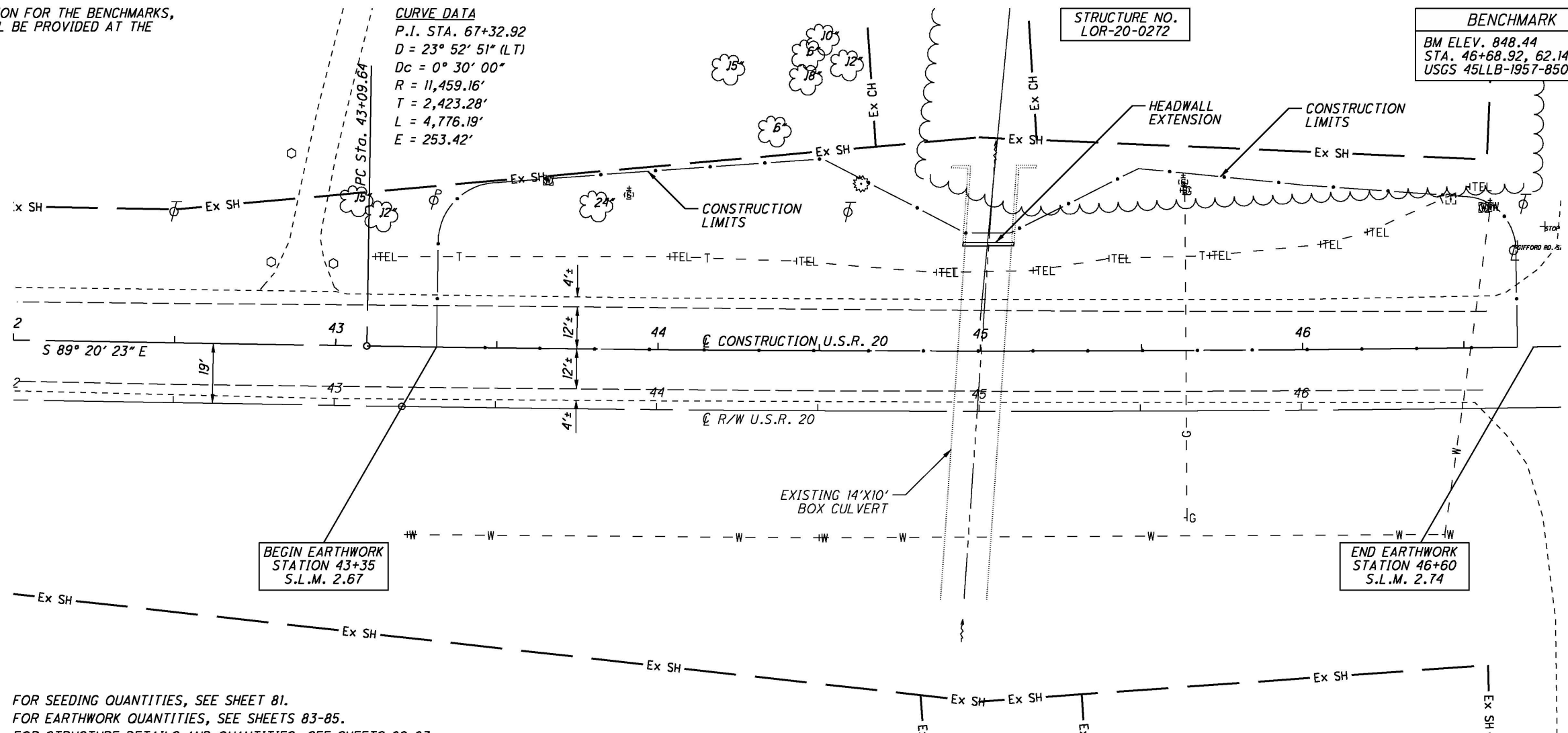


BENCHMARK
 CPI ELEV. 846.82
 STA. 35+72.48, 26.04' RT.
 IRON REBAR, YELLOW CAP

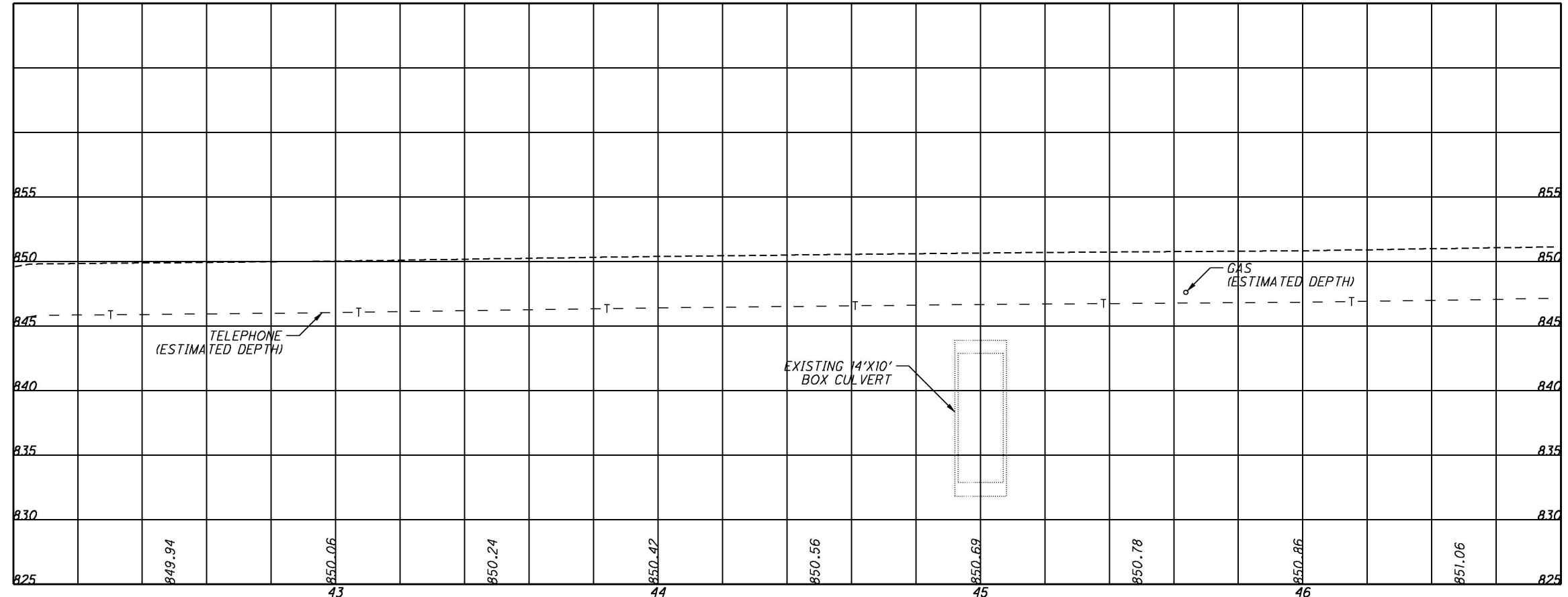
CURVE DATA
 P.I. STA. 67+32.92
 D = 23° 52' 51" (LT)
 Dc = 0° 30' 00"
 R = 11,459.16'
 T = 2,423.28'
 L = 4,776.19'
 E = 253.42'

STRUCTURE NO.
 LOR-20-0272

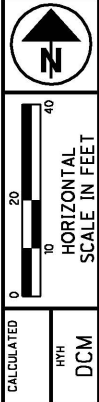
BENCHMARK
 BM ELEV. 848.44
 STA. 46+68.92, 62.14' LT.
 USGS 45LLB-1957-850



FOR SEEDING QUANTITIES, SEE SHEET 81.
 FOR EARTHWORK QUANTITIES, SEE SHEETS 83-85.
 FOR STRUCTURE DETAILS AND QUANTITIES, SEE SHEETS 86-87.



DESIGN FILE: i:\projects\77284\Struct\LOR20_0270\sheets\77284CP001.dgn
 WORKSTATION: sdeer DATE: 11/15/2007



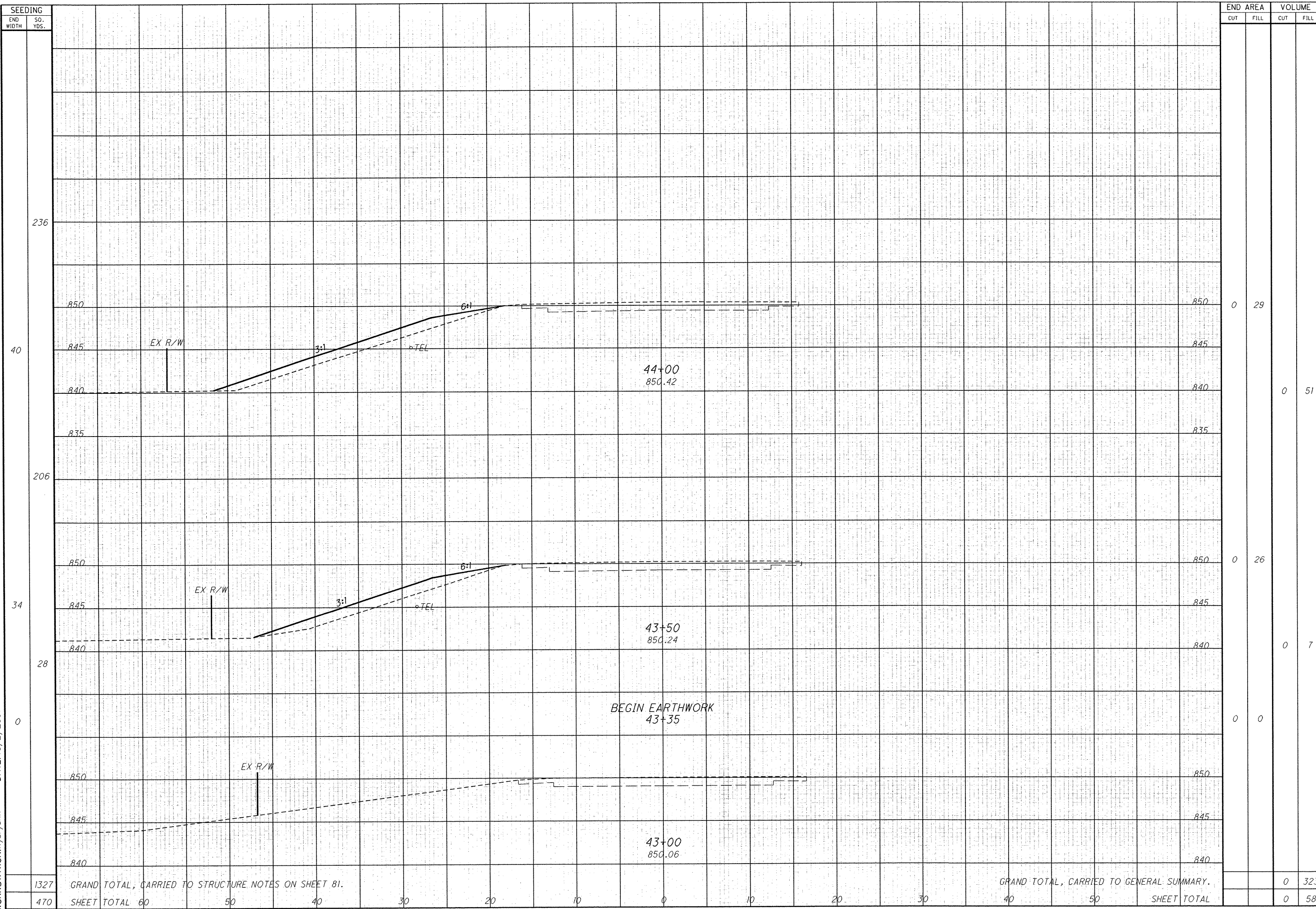
PLAN AND PROFILE - STRUCTURE LOR-20-0272
 STA. 42+00 TO STA. 46+80

REVISED: 11/15/07

HUR-20-16.35
 LOR-20-0.00

82
 107

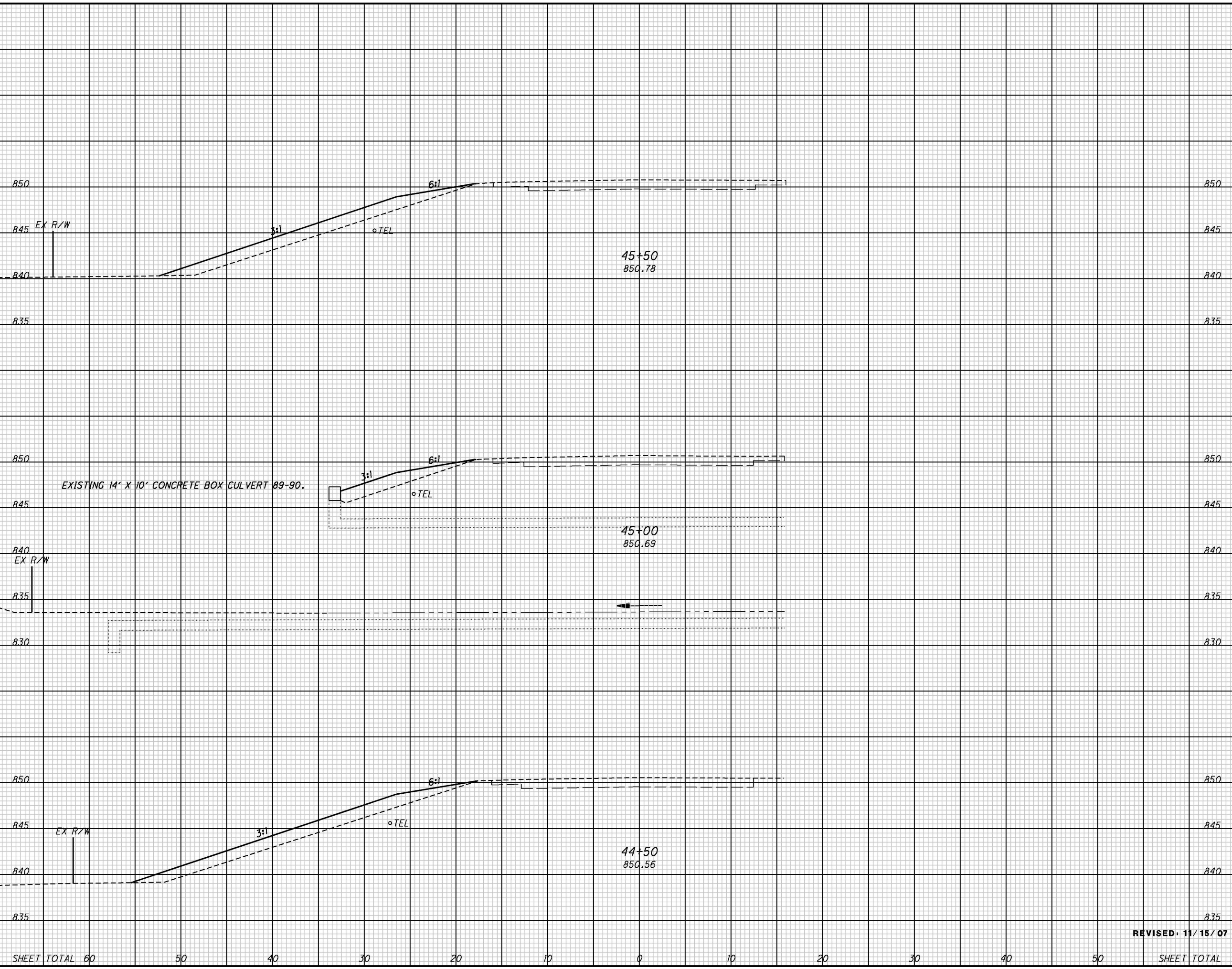
DESIGN FILE: i:\projects\77284\Struct\LOR020_0270\sheets\77284XS001.dgn
 WORKSTATION:hyryanh DATE:10/2/2007



CALCULATED BY: HYR
 CHECKED BY: DCM
CROSS SECTIONS
STA. 43+00.00 TO STA. 44+00.00
HUR-20-16.35
LOR-20-0.00
 83
 107

DESIGN FILE: i:\projects\77284\Struct\LOR020_0270\sheets\77284XS001.dgn
 WORKSTATION: sdeer DATE: 11/15/2007

SEEDING	END WIDTH	SQ. YDS.	END AREA		VOLUME	
			CUT	FILL	CUT	FILL
256			0	37		
48			0	48		
175			0	15		
15			0	52		
167			0	41		
45			0	65		
598	SHEET TOTAL	60			0	165



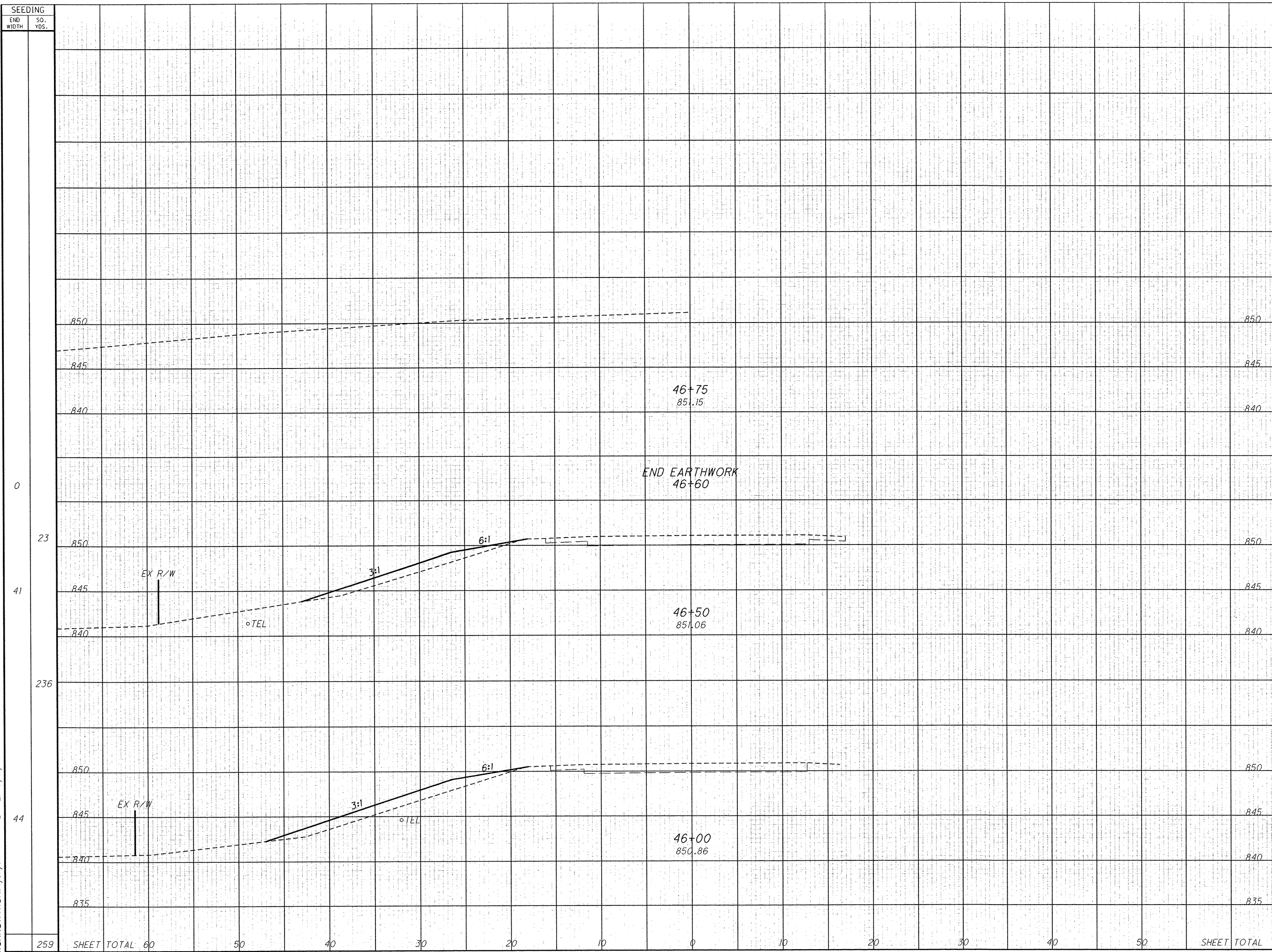
END AREA	VOLUME	CALCULATED	HYH	CHECKED	DCM
0	37				
0	48				
0	15				
0	52				
0	41				
0	65				

CROSS SECTIONS
 STA. 44+50.00 TO STA. 45+50.00
 HUR-20-16.35
 LOR-20-0.00
 84
 107

REVISED: 11/15/07

SHEET TOTAL

DESIGN FILE: I:\projects\77284\Struct\LOR020_0270\sheets\77284X5001.dgn
 WORKSTATION: hyryanh DATE: 10/2/2007



SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL
0		0	0	0	3
23		0	17	0	39
41		0	25	0	58
236		0	25	0	58
44		0	25	0	58
259	SHEET TOTAL	60	50	40	30
		50	40	30	20
		40	30	20	10
		30	20	10	0
		20	10	0	10
		10	0	10	20
		0	10	20	30
		10	20	30	40
		20	30	40	50
	SHEET TOTAL	80	100	100	100

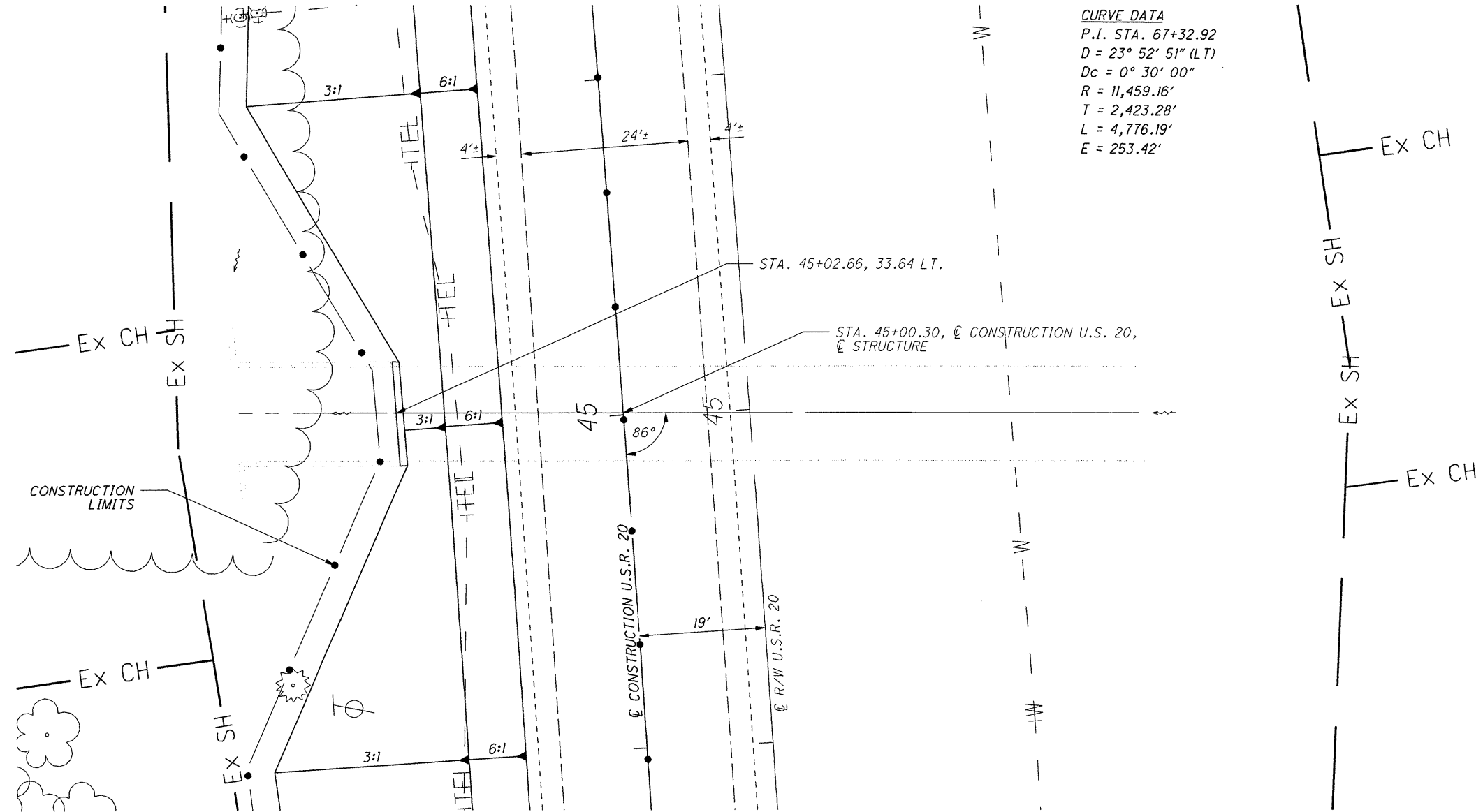
CROSS SECTIONS
 STA. 46+00.00 TO STA. 46+75.00

HUR-20-16.35
 LOR-20-0.00

85
 107

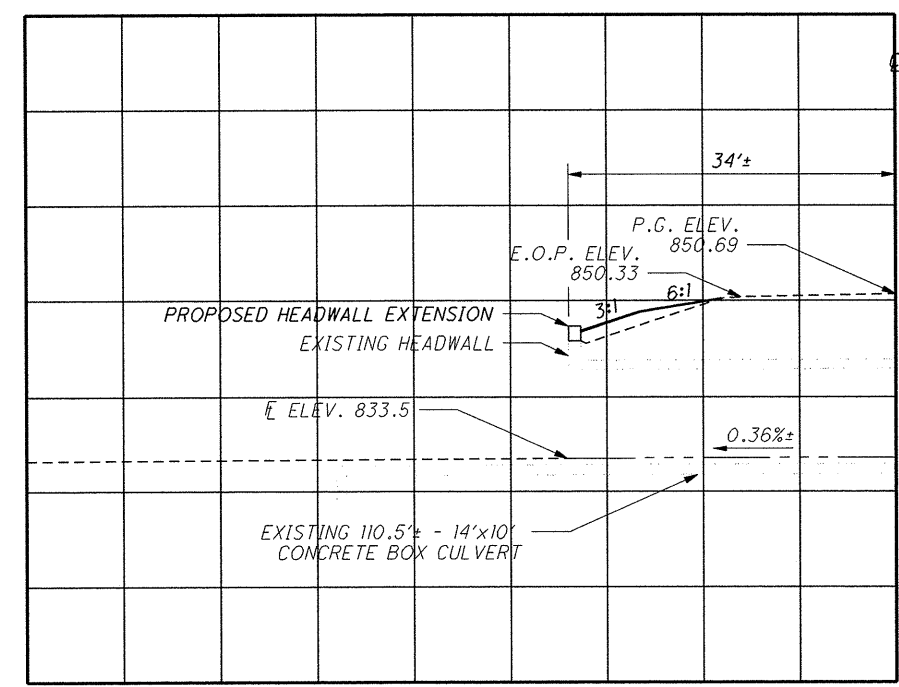
EXISTING STRUCTURE

TYPE: 14'-0" x 10'-0" CONCRETE BOX CULVERT WITH FULL-HEIGHT HEADWALLS
 SPANS: 14'-0"
 ROADWAY: 2 - 12' LANES, 4' PAVED SHOULDERS
 LOADING: H-15-33
 SKEW: 4° LEFT FORWARD (AS BUILT)
 APPROACH SLABS: NONE
 ALIGNMENT: TANGENT
 CROWN: VARIES
 STRUCTURAL FILE NUMBER: 4701895
 DATE BUILT: 1939
 DISPOSITION: TO REMAIN



CURVE DATA
 P.I. STA. 67+32.92
 D = 23° 52' 51" (LT)
 Dc = 0° 30' 00"
 R = 11,459.16'
 T = 2,423.28'
 L = 4,776.19'
 E = 253.42'

PLAN VIEW

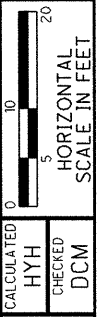


HALF PROFILE VIEW

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR HEADWALL DETAILS AND ESTIMATED QUANTITIES, SEE SHEET 2 OF 2.

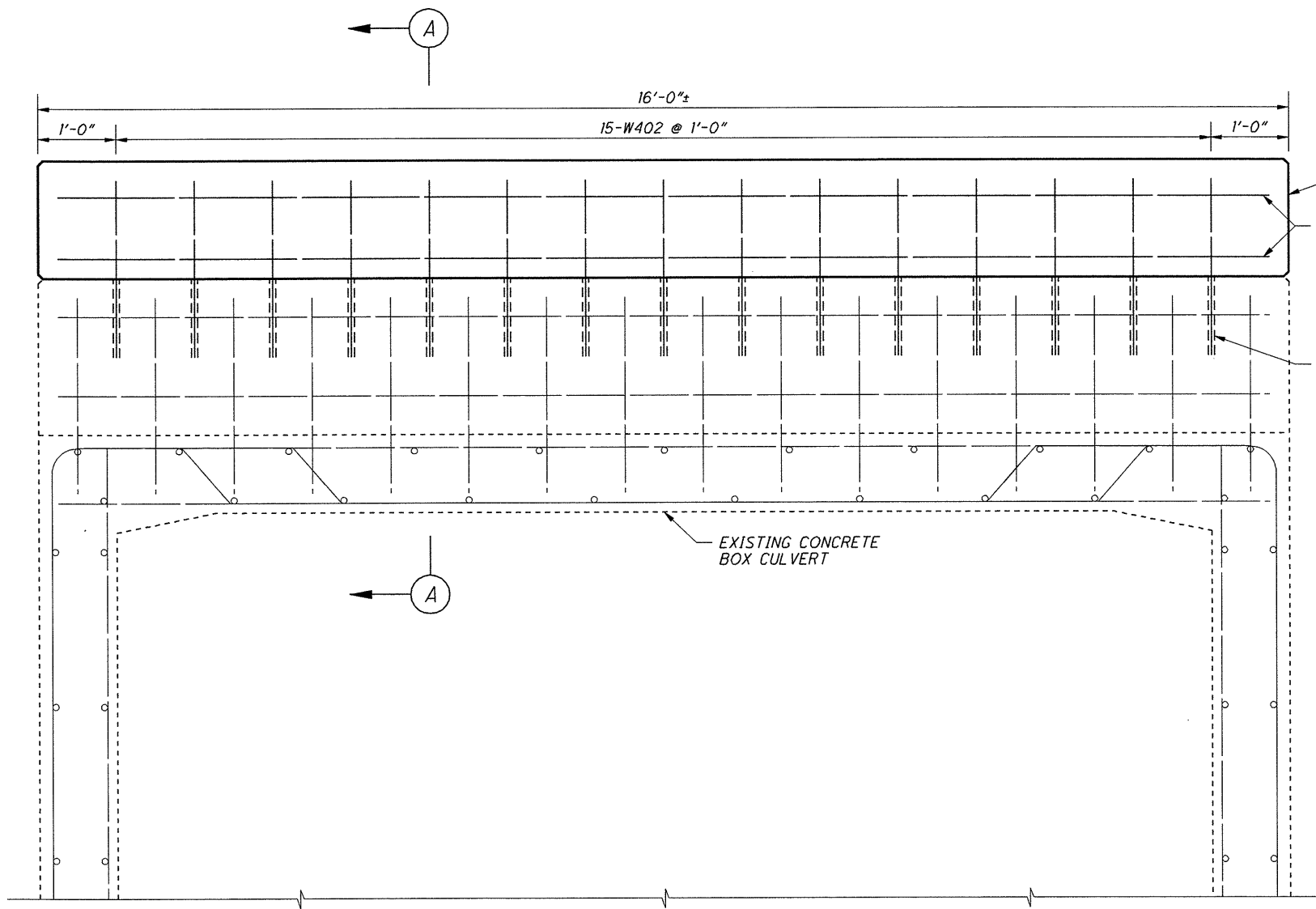
DESIGN FILE: I:\projects\77284\Struct\LOR020_0270\sheets\77284DC001.dgn
 WORKSTATION:hyar:yanh
 DATE: 10/2/2007



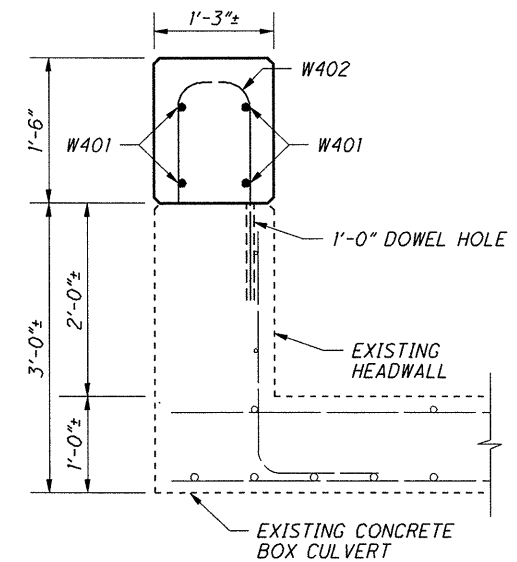
STRUCTURE PLAN AND PROFILE
LOR-20-0272

HUR-20-16.35
LOR-20-0.00

DESIGN FILE: I:\projects\77284\Struct\LOR020_0270\sheets\77284DC002.dgn
 WORKSTATION:hyarjanh DATE:10/2/2007



PARTIAL END VIEW

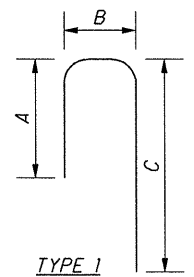


SECTION A-A

LEGEND
 B.F. - BOTH FACES
 TYP. - TYPICAL

REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	WEIGHT	TYPE	A	B	C
W401	4	15'-6"	41	STR			
W402	15	4'-1"	41	1	1'-3"	0'-9"	2'-3"
		TOTAL	82				



TYPE 1

DESIGN DATA

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4.0 KSI
 REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

ITEM 511, CLASS C CONCRETE, HEADWALL, AS PER PLAN
 THE COURSE AGGREGATE FOR THIS ITEM SHALL BE LIMESTONE.

BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE HEADWALL EXTENSION SHALL BE INCLUDED WITH ITEM 511 - CLASS C CONCRETE, HEADWALL, AS PER PLAN. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL. PAYMENT FOR DOWEL HOLES SHALL BE INCLUDED WITH ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT.

NOTES

- INSTALL REINFORCING STEEL WITH 3" CLEARANCE FROM THE CONCRETE SURFACE.
- THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, W401 IS A NO. 4 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
- EXPOSED EDGES TO BE BEVELED 3/4".

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
509	10000	82	POUND	EPOXY COATED REINFORCING STEEL
510	10000	15	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
511	46601	1.1	CU YD	CLASS C CONCRETE, HEADWALL, AS PER PLAN

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET.

CALCULATED
 HYH
 CHECKED
 DCM

HEADWALL DETAIL
 LOR-20-0272

HUR-20-16.35
 LOR-20-0.00

2 / 2

87
 107

STRUCTURE HUR-20-1774 (SFN 3901394)

FUNDING: 80-FEDERAL/ 20-STATE

ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
SPECIAL	51631300	102	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	92

STRUCTURE HUR-20-2226 (SFN 3901416)

FUNDING: 80-FEDERAL/ 20-STATE

ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	98500	.3	CU YD	REMOVAL MISC.: CONCRETE	89
601	27000	23	CU YD	DUMPED ROCK FILL, TYPE C	

STRUCTURE HUR-20-2283 (SFN 3901440)

FUNDING: 80-FEDERAL/ 20-STATE

ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	98500	.3	CU YD	REMOVAL MISC.: CONCRETE	89

STRUCTURE HUR-20-2562 (SFN 3901505)

FUNDING: 80-FEDERAL/ 20-STATE

ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	98200	96	FT	REMOVAL MISC.: ELASTOMERIC COMPRESSION SEAL	89
512	10050	509	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
512	10300	1396	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
516	10901	96	FT	ELASTOMERIC COMPRESSION SEAL, AS PER PLAN	89

STRUCTURE LOR-20-0217 (SFN 4701852)

FUNDING: 80-FEDERAL/ 20-STATE

ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	67	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
SPECIAL	51631300	80	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	97

STRUCTURE LOR-20-0272 (SFN 4701895)

FUNDING: 80-FEDERAL/ 20-STATE

ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
509	10000	82	POUND	EPOXY COATED REINFORCING STEEL	
510	10000	15	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	46601	1.1	CU YD	CLASS C CONCRETE, HEADWALL, AS PER PLAN	87

DESIGN FILE: I:\projects\7284\Structure\HURLOR20\strsum.dgn
 WORKSTATION: dmollens DATE: 10/1/2007

DESIGN AGENCY
 DISTRICT THREE
 OFFICE OF PRODUCTION

DATE
 10/07

REVIEWED
 DJV

DESIGNED
 GTS
 CHECKED
 DCM

STRUCTURE SUMMARY

HUR-20-16.35
 LOR-20-0.00

DESIGN FILE: I:\projects\77284\structure\strnote.dgn
 WORKSTATION: dmo\lens DATE: 10/1/2007

REFERENCES SHALL BE MADE TO STANDARD DRAWINGS:

BP-3.1	DATED	7/16/04
MT-97.10	DATED	9/05/06
MT-105.10	DATED	10/18/02
MT-105.11	DATED	10/18/02

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED ON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 INCLUDING THE 2003, 2004, 2005 AND 2006 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

CONCRETE CLASS C - $f'_c = 4,000$ psi
 REINFORCING STEEL - ASTM A615 OR A996 GRADE 60
 MINIMUM $F_y = 60,000$ psi.

DECK PROTECTION METHOD:

SEALING WITH HMWM RESIN

EXISTING PLANS:

EXISTING PLANS FOR STRUCTURES:

STRUCTURE	PLAN	YEAR
HUR-20-1774	HUR-20-27.010	1999
HUR-20-2226	HUR-20-17.56	1964
HUR-20-2283	HUR-20-17.56	1964
HUR-20-2562	WAKEMAN BRIDGE OVER VERMILION RIVER	1932
	HUR-20-24.73	1982
LOR-20-0217	LOR-20-0216	1987
LOR-20-0272	OBERLIN- NORWALK ROAD	1939

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES:

SPECIAL CARE SHALL BE TAKEN, WHEN PLACING THE ASPHALT CONCRETE FEATHERING TO EFFECT A SMOOTH TRANSITION FROM THE EXISTING APPROACH PAVEMENT TO THE BRIDGE DECK OR APPROACH SLAB. THE CONTRACTOR'S ATTENTION IS CALLED TO STANDARD DRAWING BP-3.1 FOR REQUIRED TOLERANCES IF TAPER DIMENSIONS ARE NOT GIVEN IN THE PLAN.

ITEM 202- REMOVAL MISC.: CONCRETE

THIS ITEM SHALL BE USED TO REMOVE THE 2'-0" WIDE X 1" THICK CONCRETE OVERLAY ON THE APPROACH SLABS. THE CONCRETE OVERLAY SHALL BE REMOVED WITHOUT DAMAGING THE EXISTING APPROACH SLAB.

PAYMENT FOR THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE ITEM WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 202- REMOVAL MISC.: ELASTOMERIC COMPRESSION SEAL

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING COMPRESSION SEAL GLAND WITHIN THE EXISTING STEEL ARMOR.

PAYMENT FOR THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR THE ABOVE ITEM WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 516- ELASTOMERIC COMPRESSION SEAL, AS PER PLAN:

THIS ITEM SHALL BE USED TO CLEAN THE EXISTING STEEL ARMOR AND INSTALL THE NEW ELASTOMERIC COMPRESSION SEAL GLAND INTO THE EXISTING STEEL ARMOR.

THE ELASTOMERIC COMPRESSION SEAL SHALL BE TYPE WJ-300 AS MANUFACTURED BY WATSON BOWMAN ACME CORP., 95 PINEVIEW DRIVE, AMHERST, NEW YORK 14228, TYPE CV-3000 AS MANUFACTURED BY D.S. BROWN, 300 EAST CHERRY STREET, NORTH BALTIMORE, OHIO 45872 OR AN APPROVED EQUAL.

THE EXISTING STEEL ARMOR CLEANING AND THE INSTALLATION OF THE NEW SEAL SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

PAYMENT FOR THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR THE ABOVE ITEM WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DESIGN AGENCY
 DISTRICT THREE
 OFFICE OF PRODUCTION

DATE 10/07
 REVIEWED DJV
 STRUCTURE FILE NUMBER
 DRAWN GTS
 GTS
 CHECKED DCM

STRUCTURE GENERAL NOTES

HUR-20-16.35
 LOR-20-0.00

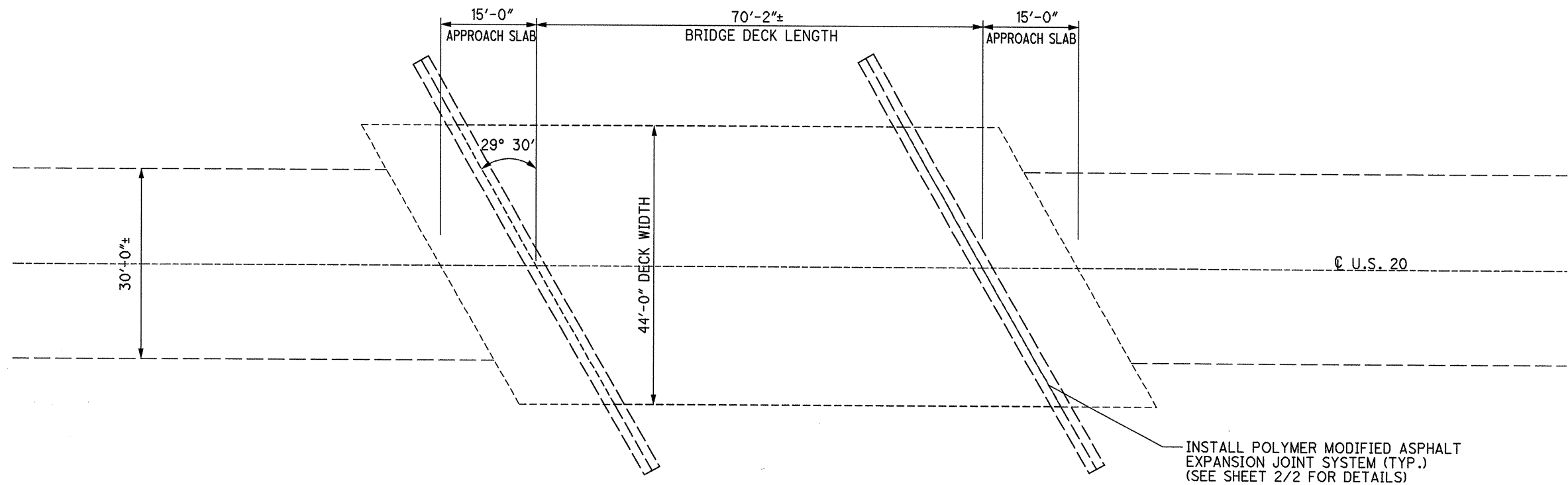
DESIGN FILE: I:\projects\77284\BStruct\HURLOR20\25665BRTRTREAT.dgn
 WORKSTATION: dmo\llens DATE: 10/2/2007

PART	COUNTY, ROUTE, BRIDGE NO.	LOCATION	STRUCTURE TYPE	BRIDGE DECK DATA					ROADWAY DATA			
				LENGTH (BRIDGE DECK)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH	
				FT.	FT.	SQ. YD.			FT.	FT.	FT.	
A	* HUR-20-1774	OVER RATTLESNAKE CREEK	SINGLE SPAN PRESTRESSED CONCRETE BOX BEAM	70'-2"	44'	343	29° 30' R.F.	ASPHALT	30'	44'-0"	15'-0"	
A	** HUR-20-2226	OVER TRIBUTARY OF VERMILION RIVER	SINGLE SPAN CONCRETE SLAB	25'-6"	43'-0"	122	0°	CONCRETE	30'	24'-0"	25'-0"	
A	** HUR-20-2283	OVER TRIBUTARY OF VERMILION RIVER	SINGLE SPAN CONCRETE SLAB	15'-0"	42'-3"	71	0°	CONCRETE	30'	24'-0"	25'-0"	
A	+ HUR-20-2449	OVER TRIBUTARY OF VERMILION RIVER	SINGLE SPAN CONCRETE SLAB	14'-0"	38'-8"	60	6° 20' L.F.	CONCRETE	31'			
A	** HUR-20-2562	OVER VERMILION RIVER	CONCRETE DECK ARCH	312'-0"	40'-0"	1396	0°	CONCRETE	40'	40'-0"	25'-0"	
B	++ LOR-20-0217	OVER EAST FORK OF VERMILION RIVER	SINGLE SPAN PRESTRESSED CONCRETE BOX BEAM	61'-2"	40'-0"	272	0°	ASPHALT	33'	40'-0"	15'-0"	
B	■ LOR-20-0272	OVER EAST FORK OF VERMILION RIVER	REINFORCED CONCRETE BOX CULVERT				4° L.F.	ASPHALT	32'			

- * PLANE 1" ACROSS BRIDGE DECK AND APPROACHES. TAPER INTERMEDIATE COURSE FROM 1" TO 0" IN 100' FROM BRIDGE DECK, OMIT INTERMEDIATE COURSE ON BRIDGE DECK. TAPER INTERMEDIATE COURSE FROM 0" TO 1" IN 100' BEYOND THE BRIDGE DECK, PAVE SURFACE COURSE 1/2" ALONG TAPERED PORTION AND BRIDGE DECK. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).
- ** OMIT PLANING AND RESURFACING ON BRIDGE DECK, TAPER INTERMEDIATE COURSE FROM 1" TO 0" IN 100' FROM BRIDGE DECK, OMIT INTERMEDIATE COURSE ON BRIDGE DECK. TAPER INTERMEDIATE COURSE FROM 0" TO 1" IN 100' BEYOND THE BRIDGE DECK, PAVE SURFACE COURSE 1/2" ALONG TAPERED PORTION. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).
- + OMIT PLANING AND RESURFACING ON BRIDGE DECK, TAPER INTERMEDIATE COURSE FROM 1" TO 0" IN 100' FROM BRIDGE DECK, OMIT INTERMEDIATE COURSE ON BRIDGE DECK. TAPER INTERMEDIATE COURSE FROM 0" TO 1" IN 100' BEYOND THE BRIDGE DECK, PAVE SURFACE COURSE 1/2" ALONG TAPERED PORTION. (NO STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).
- ++ TAPER THE PLANING FROM 1" TO 2 1/2" DEEP IN 100' FROM THE BRIDGE DECK. PLANE 2 1/2" DEEP ACROSS THE BRIDGE DECK. TAPER THE PLANING FROM 2 1/2" TO 1" DEEP IN 100' BEYOND THE BRIDGE DECK. PAVE FULL WIDTH FOR BOTH COURSES OVER THE STRUCTURE (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).
- PLANE AND PAVE OVER STRUCTURE (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).

DESIGN AGENCY: DISTRICT THREE
 OFFICE OF PRODUCTION
 DATE: 10/07
 REVIEWED: DJV
 DRAWN: GTS
 CHECKED: DCM
 BRIDGE TREATMENT
 HUR-20-16.35
 LOR-20-0.00
 90
 107

DESIGN FILE\PROJECTS\77284\STRUCT\HURLOR20\HUR20-1774SD.DGN
 WORKSTAT\DESIGN\LENN\ATE01/2007



ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	102	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

- 1) GUARDRAIL NOT SHOWN.
- 2) INSTALL POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
SEE DETAILS ON SHEET 2/2.

DESIGN AGENCY DISTRICT THREE OFFICE OF PRODUCTION	REVIEWED DJV	DATE 10/07	STRUCTURE FILE NUMBER 3901394	PLAN VIEW HUR-20-1774 OVER FORK OF RATTLESNAKE CREEK
DESIGNED GTS	DRAWN GTS	CHECKED DCM	REVISIONS	HUR-20-16.35 LOR-20-0.00
1 / 2				91 107

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PRODUCT NAME	SUPPLIER	ADDRESS	PHONE NO.
THORMA-JOINT	DYNAMIC SURFACE APPLICATIONS, LTD	373 VILLAGE RD. PENNSDALE, PA 17756	(570)546-6041
MATRIX 502	CRAFCO INC.	420 N. ROOSEVELT AVE. CHANDLER, AZ 85226	(800)528-8242
EXPANDEX JOINT SYSTEM	WATSON-BOWMAN ACME	95 PINEVIEW DR. AMHERST, NY 14228	(716)691-7566
APJ ASPHALTIC PLUG EXPANSION JOINT	WYOMING EQUIPMENT SALES	281 SIXTH STREET P.O. BOX 287 WEST WYOMING, PA 18644	(570)693-2810

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE: POLYMER MODIFIED ASPHALT
 SOFTENING POINT: 180 DEGREES F. MIN.
 FLOW: 3 mm. MAX. AT 140 DEGREES F.
 PENETRATION: 9 mm. MAX. AT 77 DEGREES F.
 1 mm. MIN AT 0 DEGREES F.
 ASTM D 3407
 DUCTILITY: 40 cm. MIN. ASTM D 113
 RESILIENCE: 60% MIN. AT 77 DEGREES F.
 TENSILE ADHESION: 700% MIN.
 SPECIFIC GRAVITY: 1.10 * 0.05
 POURING TEMP: 350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT

GRADATION

THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER

SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/2" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

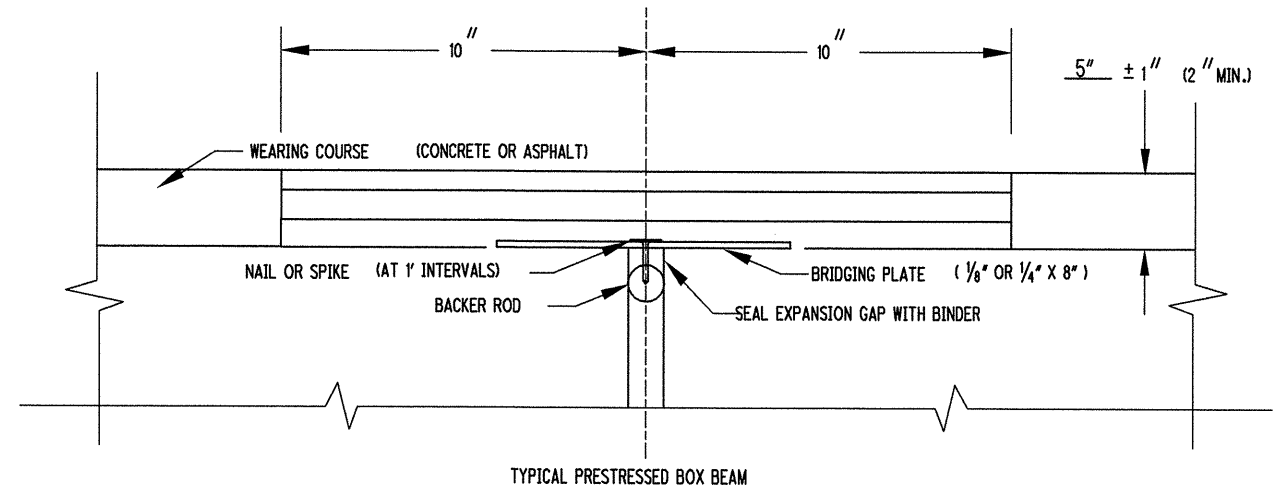
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES INCLUDING THE REMOVAL OF THE EXISTING POLYMER JOINT AT THE CONTRACT PRICE AS: ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



HUR-20-1774 SFN 3901394			
ITEM	DESCRIPTION	UNIT	QUANTITY
SPECIAL	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	FT	102

QUANTITY CARRIED TO SHEET NO. 91

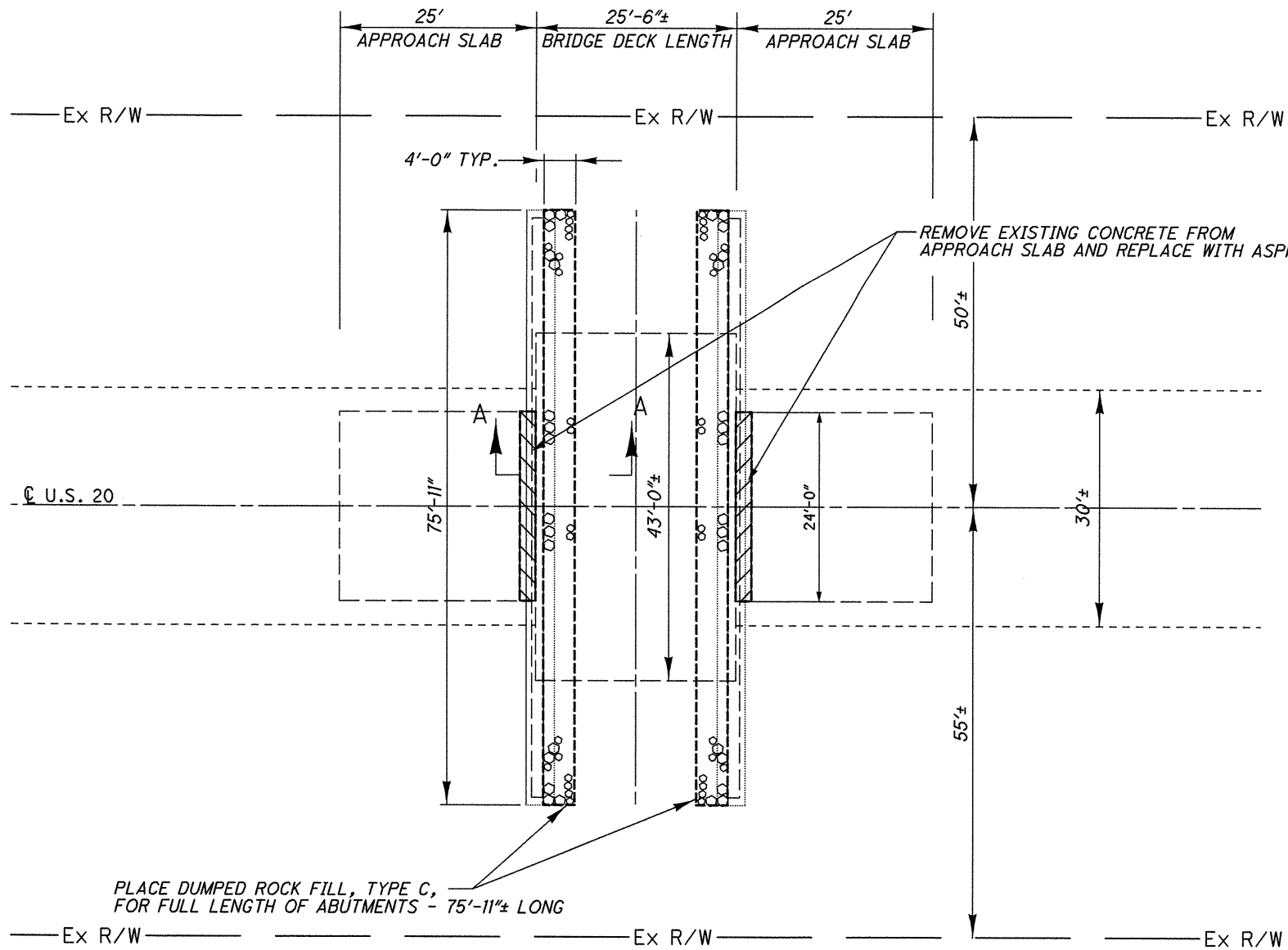
DESIGN FILE: i:\projects\77284\Struct\HURLOR20\hur20-1774.ssd.dgn
 WORKSTATION: dmollens
 DATE: 10/1/2007

DATE	10-20-96	10-17-03	04-15-05
REVISION			
CHECKED	DCM		DJV
CALCULATED			

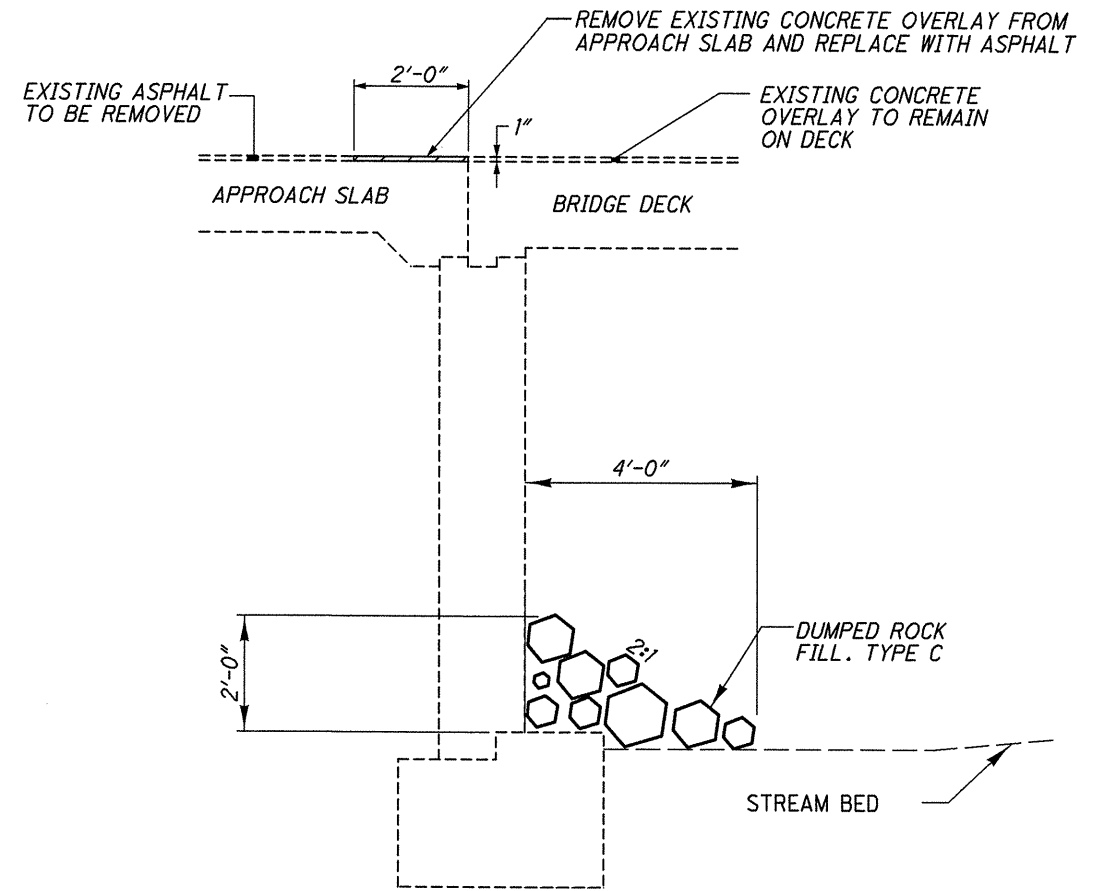
DESIGNED	MAM	BRWN	MAM
----------	-----	------	-----

POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
 HUR-20-1774 OVER FORK OF RATTLESNAKE CREEK

HUR-20-16.35
 LOR-20-0.00



PLAN VIEW



SECTION A-A
DUMPED ROCK LENGTH = 75'-11"± LONG

NOTES:

- 1) GUARDRAIL NOT SHOWN.
- 2) PLACE DUMPED ROCK FILL ALONG ENTIRE LENGTH OF BOTH ABUTMENTS.
- 3) REMOVE 2' WIDE CONCRETE OVERLAY ON APPROACH SLABS.

ITEM	QUANTITY	UNIT	DESCRIPTION
202	.3	CU YD	REMOVAL MISC.: CONCRETE
601	23	CU YD	DUMPED ROCK FILL, TYPE C

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

DESIGN FILE: I:\projects\77284\Structure\HURLOR20\hur20-2226sd.dgn
 WORKSTATION: dmo\lens DATE: 10/1/2007

DESIGN AGENCY
 DISTRICT THREE
 OFFICE OF PRODUCTION

DATE
 10/07
 REVIEWED
 DJV
 STRUCTURE FILE NUMBER
 3901416

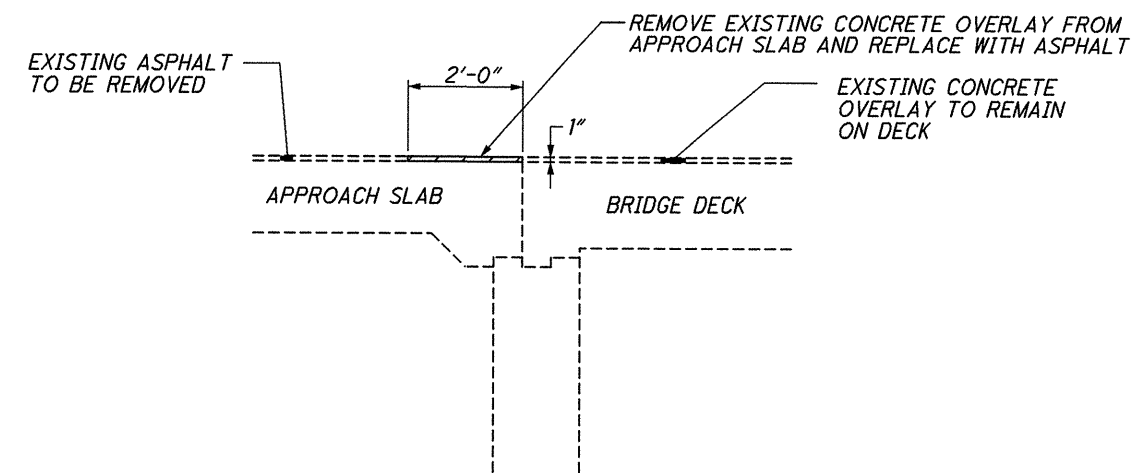
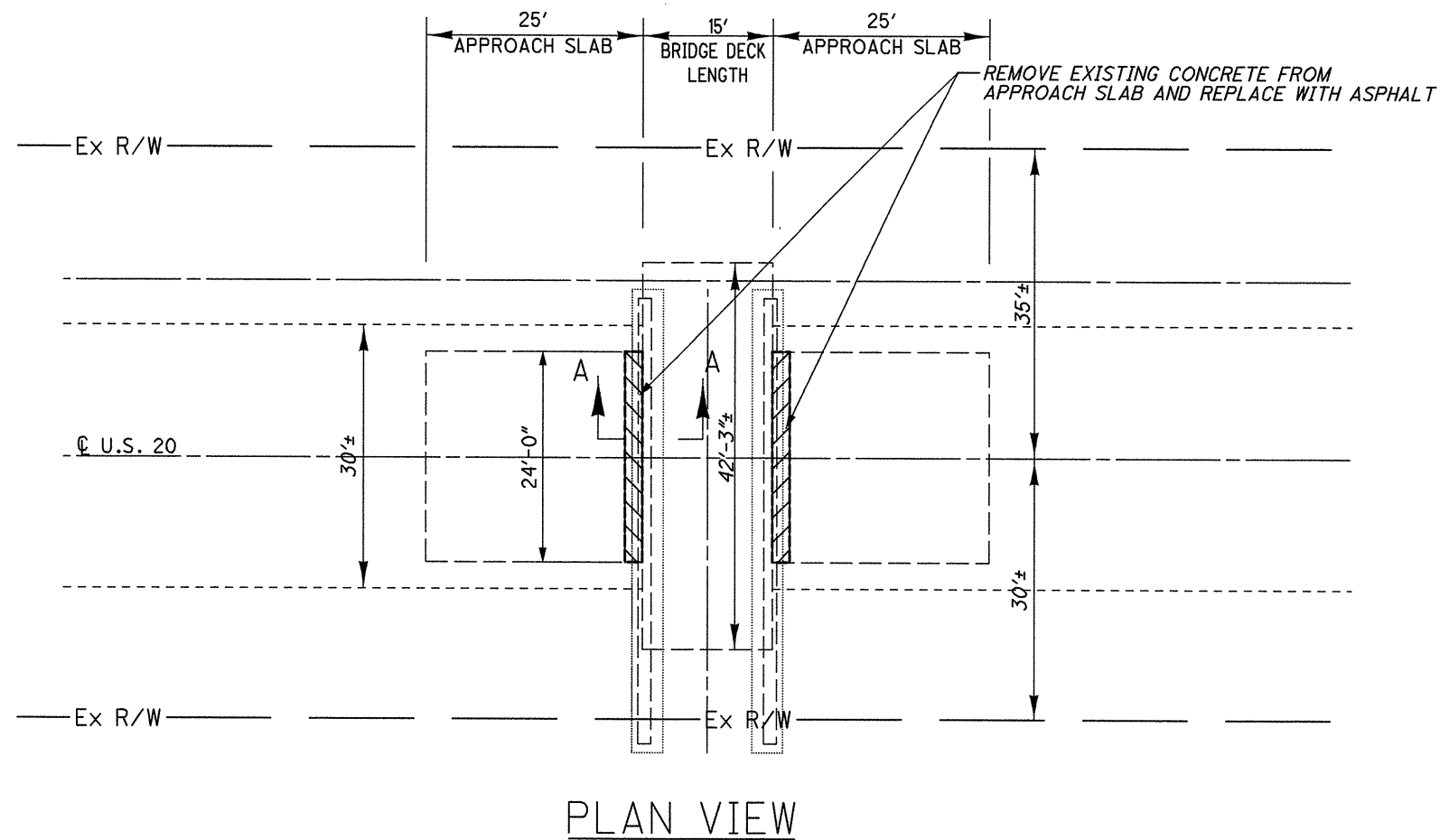
DESIGNED
 GTS
 CHECKED
 DCM
 DRAWN
 GTS
 REVISED

PLAN VIEW
 HUR-20-2226 OVER TRIBUTARY OF VERMILION RIVER

HUR-20-16.35
 LOR-20-0.00

1 / 1

93
 107



SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
202	.3	CU YD	REMOVAL MISC.: CONCRETE

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

- 1) GUARDRAIL NOT SHOWN.
- 2) REMOVE 2' WIDE CONCRETE OVERLAY ON APPROACH SLABS.

DESIGN FILE: I:\projects\7284\Structure\HURLOR20\hur20-2283sd.dgn
 WORKSTATION: dmlens DATE: 10/1/2007

DESIGN AGENCY
 DISTRICT THREE
 OFFICE OF PRODUCTION

REVIEWED
 DJV
 DATE
 10/07

STRUCTURE FILE NUMBER
 3901440

DESIGNED
 GTS
 CHECKED
 DCM

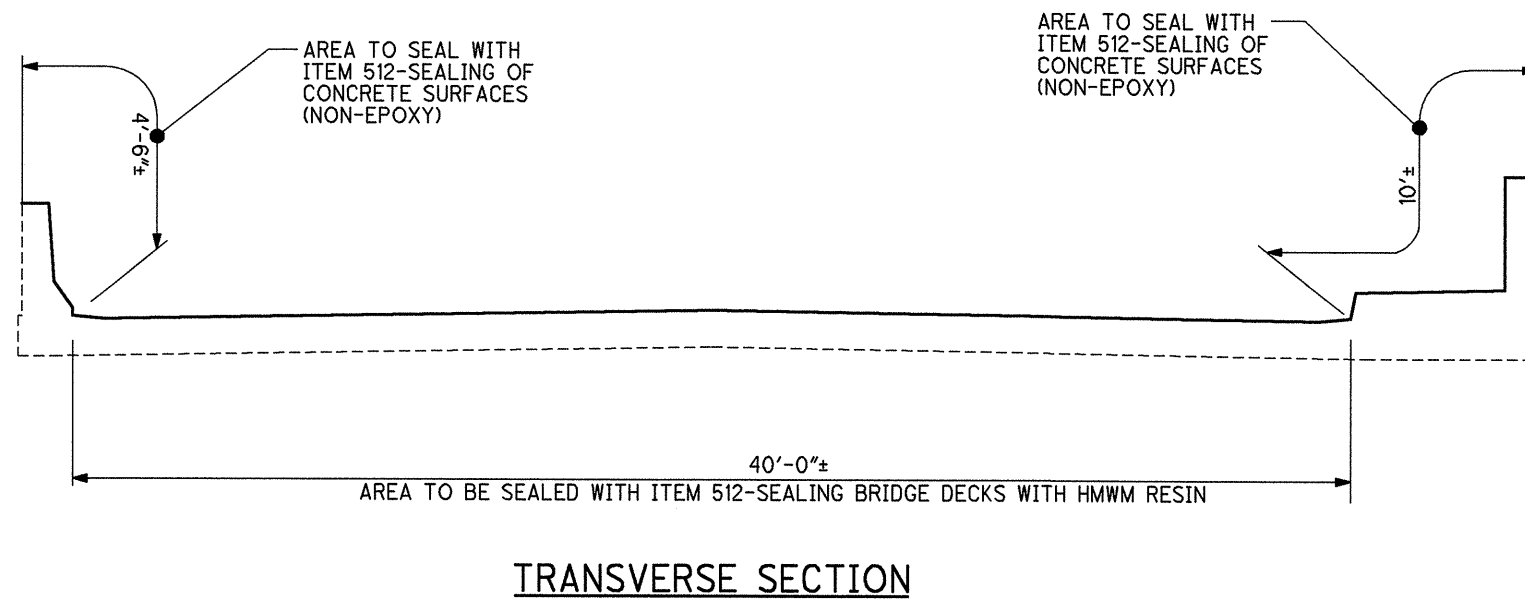
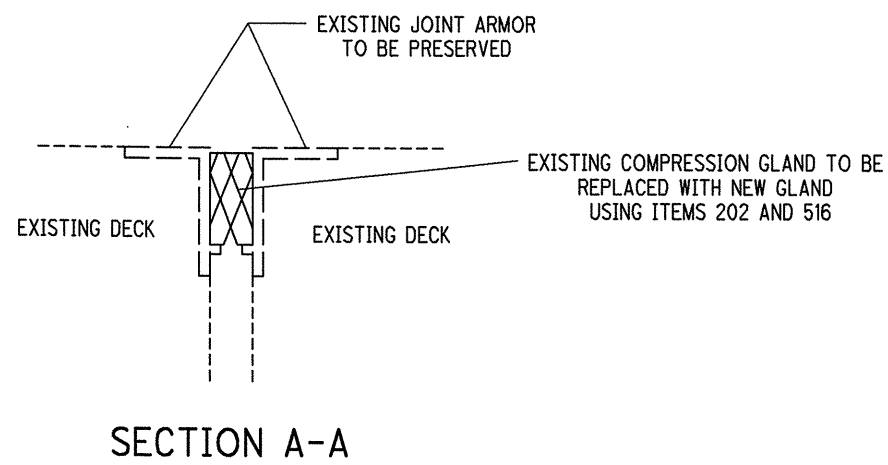
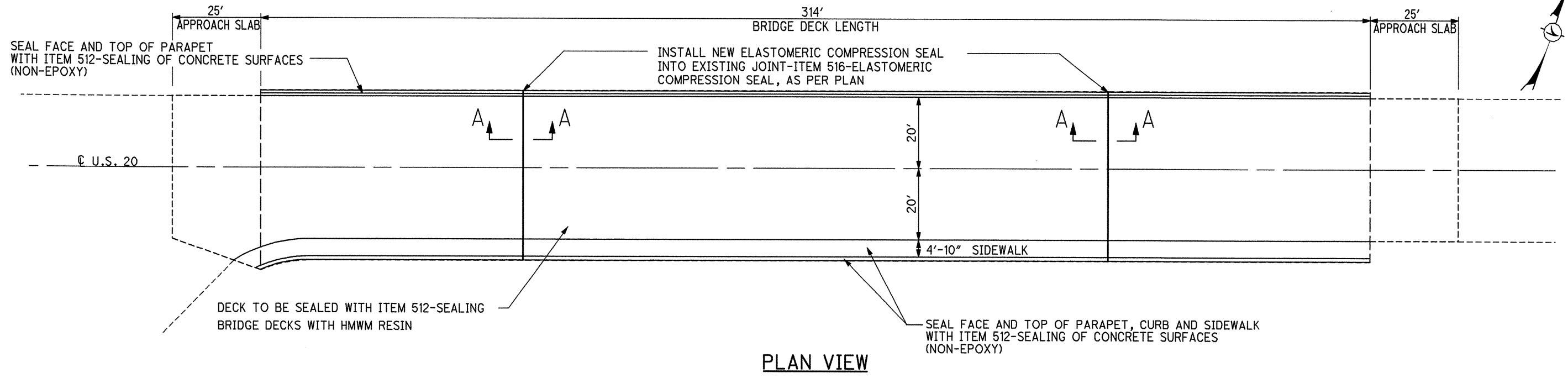
PLAN VIEW
 HUR-20-2283 OVER TRIBUTARY OF VERMILION RIVER

HUR-20-16.35
 LOR-20-0.00

1 / 1

94
 107

DESIGN FILE: I:\projects\77284\Struct\HURLOR20\hur20-2562sd.dgn
 WORKSTATION: dmollens DATE: 10/1/2007



ITEM	QUANTITY	UNIT	DESCRIPTION
202	96	FT	REMOVAL MISC.: ELASTOMERIC COMPRESSION SEAL
512	509	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY)
512	1396	SQ YD	SEALING BRIDGE DECKS WITH HMWM RESIN
516	96	FT	ELASTOMERIC COMPRESSION SEAL, AS PER PLAN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

- 1) GUARDRAIL NOT SHOWN.
- 2) SEAL DECK AS DETAILED ABOVE
- 3) SEAL PARAPETS, CURB AND SIDEWALK AS DETAILED ABOVE.
- 4) REMOVE EXISTING AND INSTALL NEW COMPRESSION SEAL GLAND AT LOCATIONS SHOWN ABOVE.

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DATE 10/07
REVIEWED DJV
STRUCTURE FILE NUMBER 3901505

DRAWN GTS
CHECKED DCM

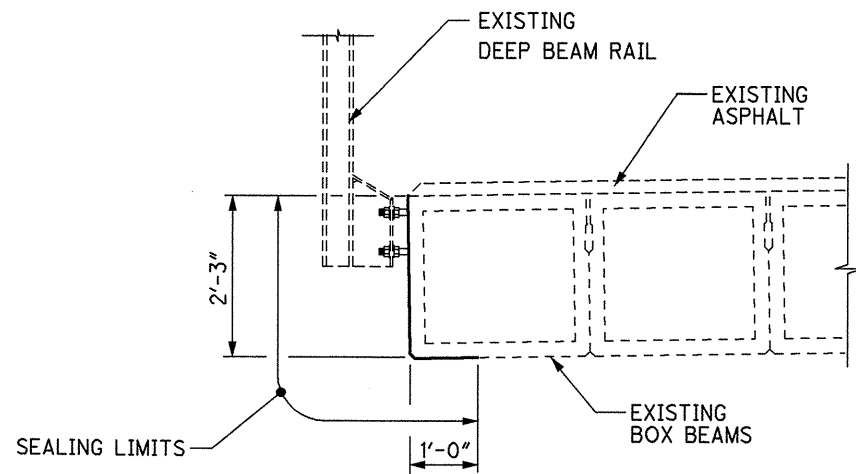
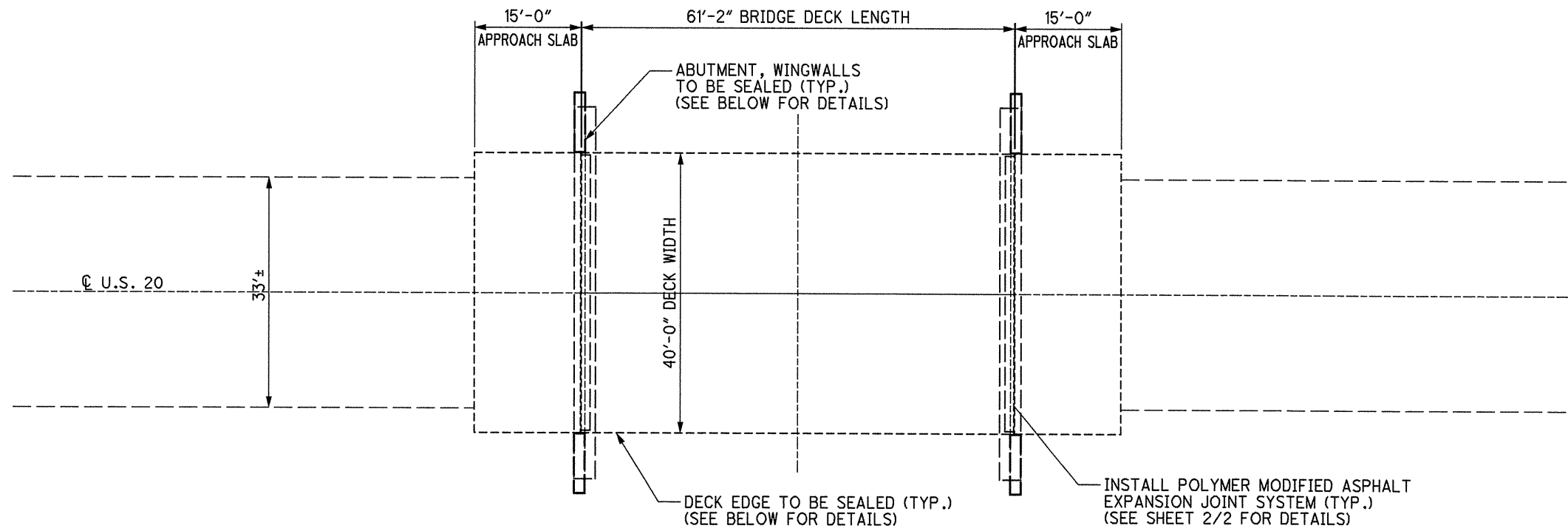
PLAN VIEW
HUR-20-2562 OVER VERMILION RIVER

HUR-20-16.35
LOR-20-0.00

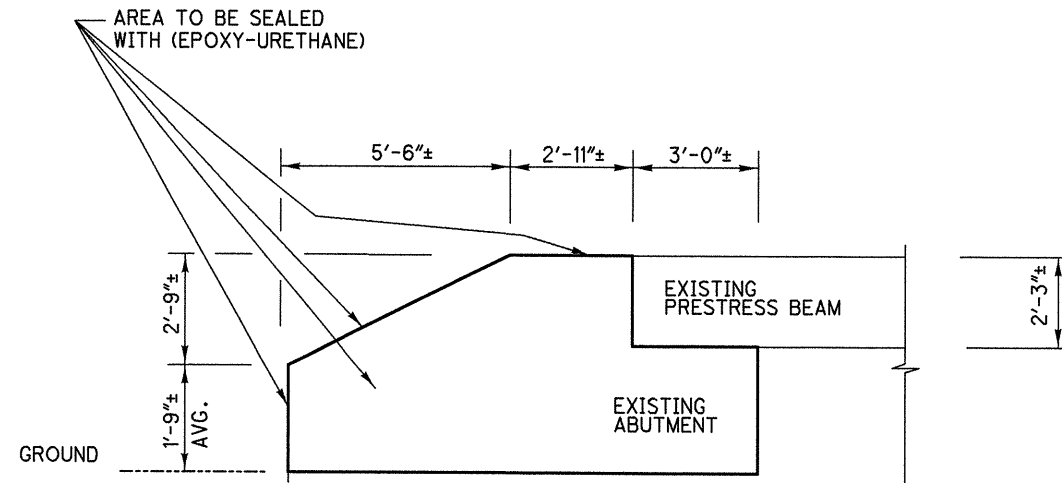
1 / 1

95
107

DESIGN FILE: I:\projects\77284\Struct\HURLOR20\lor20-0217sd.dgn
 WORKSTATION:dmollens DATE:10/12/2007



TYPICAL DECK EDGE SEALING
 (BEAM SEALING LENGTH = 60'±)



TYPICAL SECTION AT WINGWALL
 (WINGWALLS ARE 1'-6" THICK)

ITEM	QUANTITY	UNIT	DESCRIPTION
512	67	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
SPECIAL	80	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

- 1) GUARDRAIL NOT SHOWN.
- 2) SEAL DECK, CURB AND SIDEWALK WITH ITEM 512.AS DETAILED ABOVE.
- 3) SEAL PARAPET WITH ITEM 512.AS DETAILED ABOVE.
- 4) INSTALL POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM. SEE SHEET 2 / 2 FOR DETAILS.

DESIGN AGENCY
DISTRICT THREE
 OFFICE OF PRODUCTION

REVIEWED
 DATE 10/07
 DJW
 STRUCTURE FILE NUMBER 390188B

DESIGNED
 GTS
 CHECKED
 DCM

PLAN VIEW
 LOR-20-0217 OVER FORK OF VERMILION RIVER

HUR-20-16.35
 LOR-20-0.00

1 / 2

96
 107

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PRODUCT NAME	SUPPLIER	ADDRESS	PHONE NO.
THORMA-JOINT	DYNAMIC SURFACE APPLICATIONS, LTD	373 VILLAGE RD. PENNSDALE, PA 17756	(570)546-6041
MATRIX 502	CRAFCO INC.	420 N. ROOSEVELT AVE. CHANDLER, AZ 85226	(800)528-8242
EXPANDEX JOINT SYSTEM	WATSON-BOWMAN ACME	95 PINEVIEW DR. AMHERST, NY 14228	(716)691-7566
APJ ASPHALTIC PLUG EXPANSION JOINT	WYOMING EQUIPMENT SALES	281 SIXTH STREET P.O. BOX 287 WEST WYOMING, PA 18644	(570)693-2810

MATERIALS:

BRIDGING PLATE:

MILD STEEL $\frac{1}{8}$ " OR $\frac{1}{4}$ " THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE: POLYMER MODIFIED ASPHALT
 SOFTENING POINT: 180 DEGREES F. MIN.
 FLOW: 3 mm. MAX. AT 140 DEGREES F.
 PENETRATION: 9 mm. MAX. AT 77 DEGREES F.
 1 mm. MIN AT 0 DEGREES F.
 ASTM D 3407
 DUCTILITY: 40 cm. MIN. ASTM D 113
 RESILIENCE: 60% MIN. AT 77 DEGREES F.
 TENSILE ADHESION: 700% MIN.
 SPECIFIC GRAVITY: 1.10 * 0.05
 POURING TEMP: 350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT
 GRADATION: THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER

SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF $\frac{1}{8}$ " OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN $\frac{1}{8}$ " AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF $\frac{1}{2}$ " THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN $\frac{3}{4}$ OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN $\frac{1}{2}$ INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

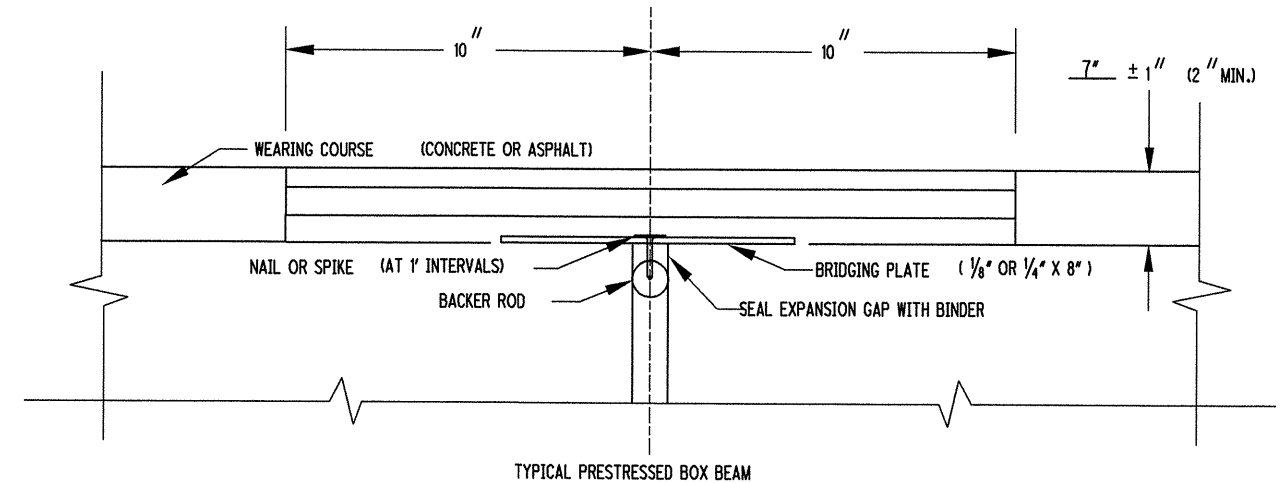
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES INCLUDING THE REMOVAL OF THE EXISTING POLYMER JOINT AT THE CONTRACT PRICE AS: ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



COST TO REMOVE EXISTING POLYMER JOINT IS INCLUDED WITH PLACING THE NEW POLYMER JOINT

LOR-20-0217 SFN 4701852			
ITEM	DESCRIPTION	UNIT	QUANTITY
SPECIAL	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	FT	80

QUANTITY CARRIED TO SHEET NO. 96

DESIGN FILES\PROJECTS\77284\STRUCT\HURLOR20\LOR20-0217SD.DGN
WORKSTAT\001\LEN\DATE\0/2/2007

DATE REVISION
 9-28-96
 9-17-03
 04-15-05

DESIGNED
 MAM
 DRAWN
 MAM

POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
 LOR-20-0217 OVER EAST FORK OF VERMILION RIVER

HUR-20-16.35
 LOR-20-0.00

2 / 2
 97
 107

UTILITY OWNERS	
ELECTRIC	OHIO EDISON COMPANY 2508 WEST PERKINS AVE. SANDUSKY, OHIO 44870 (419) 627-6889
TELEPHONE	VERIZON 83 TOWNSEND AVE. NORWALK, OHIO 44857 (419) 744-3619
GAS	COLUMBIA GAS OF OHIO 7080 FRY ROAD MIDDLEBURG HTS., OHIO 44130 (440) 891-2428
SANITARY & WATER	NORTHERN OHIO RURAL WATER P.O. BOX 96 COLLINS, OHIO 44826 (419) 668-7213

RIGHT OF WAY LEGEND SHEET HUR-20-16.35 HURON COUNTY

VILLAGE OF WAKEMAN, LOTS 76 - 79 WAKEMAN TOWNSHIP, SECTION 3, GREAT LOT 35

PROJECT DESCRIPTION
THIS IS A RESURFACING PROJECT THAT WILL INCLUDE THE CORRECTION OF THE PROFILE AND SUPER ELEVATION OF A HORIZONTAL CURVE IN WAKEMAN. ALSO INCLUDED IS THE ADDITION OF A LEFT TURN LANE FOR WAKEMAN SCHOOL AT S.L.M. 22.50.

PROJECT DESCRIPTION
ODOT PLAN: HUR-SH 290, SEC. "P" (1932)
MERRITT HYDE'S ADDITION, PLAT VOL.2, PAGE 8
SURVEY PLAT BOOK 7, PAGE 58
GRALEY ACRES SUBDIVISION NO. 1, PLAT VOL. 9, PAGE 38
HURON COUNTY ROAD RECORD, VOL. 6, PAGES 120 -
DEED VOL. 120. PAGES 585 - 590

NOTE:
THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

LEGEND:

- WL - FEE SIMPLE WITH LIMITATION OF ACCESS
- WD - WARRANTY DEED
- SH - STANDARD HIGHWAY EASEMENT
- T - TEMPORARY EASEMENT

BASIS FOR BEARINGS:

THE BEARINGS SHOWN HEREON ARE RELATIVE TO AN ASSUMED MERIDIAN AND ARE FOR THE PURPOSE OF INDICATING DIRECTIONAL VARIATION FOR THIS PROJECT ONLY.

INDEX OF SHEETS:

R/W LEGEND SHEET	1
CENTERLINE PLAT	2
PROPERTY MAP	3
SUMMARY OF ADDITIONAL R/W	4
R/W TOPOGRAPHIC SHEETS	5,7
R/W BOUNDARY SHEETS	6,8

R/W DONATION:

R/W PLAN SHEET	9,10
----------------	------

PLANS PREPARED BY:

FIRM NAME : ODOT DISTRICT THREE
 PLANS PREPARED BY: PETER W. SNYDER
 FIELD REVIEW BY: PETER W. SNYDER
 DATE COMPLETED: _____
 OWNERSHIP VERIFIED BY: NORTHWEST REGION
 DATE COMPLETED: _____
 DATE COMPLETED: 12-15-2006

CONVENTIONAL SYMBOLS

County Line	-----	Ditch / Creek (Ex)	-----
Township Line	-----	Ditch / Creek (Pr)	-----
Section Line	-----	Tree Line (Ex)	~~~~~
Corporation Line	-----	Ownership Hook Symbol	Example
Fence Line (Ex)	x-x-x-x	Property Line Symbol	Example
Center Line	-----	Break Line Symbol	Example
Right of Way (Ex)	-----	Tree (Pr)	☼
Right of Way (Pr)	-----	Tree (Ex)	☼
Standard Highway Ease.(Ex)	-----	Shrub (Ex)	☼
Temporary Right of Way	-----	Tree (Remove)	☼
Channel Ease. (Pr)	-----	Shrub (Remove)	☼
Utility Ease. (Ex)	-----	Evergreen (Ex)	☼
Railroad	-----	Stump	☼
Guardrail (Ex)	-----	Evergreen (Remove)	☼
Construction Limits	-----	Stump (Remove)	☼
Edge of Pavement (Ex)	-----	Wetland (Pr)	☼
Edge of Pavement (Pr)	-----	Grass (Pr)	☼
Edge of Shoulder (Ex)	-----	Aerial Target	☼
Edge of Shoulder (Pr)	-----	Post (Ex)	☼
		Mailbox (Ex)	☼
		Mailbox (Pr)	☼
		Light (Ex)	☼
		Telephone Marker (Ex)	☼
		Fire Hydrant (Ex)	☼
		Water Meter (Ex)	☼
		Water Valve (Ex)	☼
		Utility Valve Unknown (Ex)	☼
		Telephone Pole (Ex)	☼
		Power Pole (Ex)	☼
		Light Pole (Ex)	☼

I, JAMES E. KENYON, P. S. HAVE CONDUCTED A SURVEY OF THE EXISTING CONDITIONS FOR THE OHIO DEPARTMENT OF TRANSPORTATION, BETWEEN NOVEMBER 2005 AND JANUARY 2006. THE RESULTS OF THE SURVEY ARE CONTAINED HEREIN.

UNDERGROUND UTILITY LOCATIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY, THOUGH THEY ARE BELIEVED TO BE ACCURATE, THEIR LOCATION IS AS MARKED ON THE GROUND BY THE UTILITY COMPANY PER OUPS CONFIRMATION NUMBER 1129-019-001 AND THOSE MARKINGS SUBSEQUENTLY BEING SURVEYED AS A PART OF THIS PROJECT.


AS PART OF THIS PROJECT I HAVE RE-ESTABLISHED THE LOCATIONS OF THE EXISTING RIGHT OF WAY FOR PROPERTY TAKES CONTAINED HEREIN.

ALL OF MY WORK CONTAINED HEREIN WAS CONDUCTED IN ACCORDANCE WITH OHIO ADMINISTRATIVE CODE 4733-37 COMMONLY KNOWN AS "A MINIMUM STANDARDS FOR BOUNDARY SURVEYS IN THE STATE OF OHIO" UNLESS OTHERWISE NOTED.

THE WORDS I AND MY AS USED HEREIN ARE TO MEAN THAT EITHER MYSELF OR SOMEONE WORKING UNDER MY DIRECT SUPERVISION.

James E. Kenyon
 JAMES E. KENYON, PROFESSIONAL LAND SURVEYOR NO. 6891, 12-15-06
 DATE

SURVEYORS SEAL



SIGNED: _____
 DATE: _____

DESIGN FILE: I:\Projects\77284\RW\846RL001.dgn
 WORKSTATION: pany66r
 DATE: 12/15/2006

RIGHT OF WAY
LEGEND SHEET

HUR-20-16.35

FEDERAL
PROJECT NO.

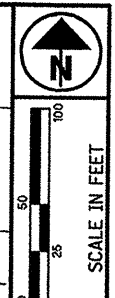
PTD NO.
77284

CALCULATED
CHECKED

1/10

98
107

HUR-20-25.15
 HURON COUNTY
 VILLAGE OF WAKEMAN
 WAKEMAN TOWNSHIP
 SECTION 3



PTD NO.
77284

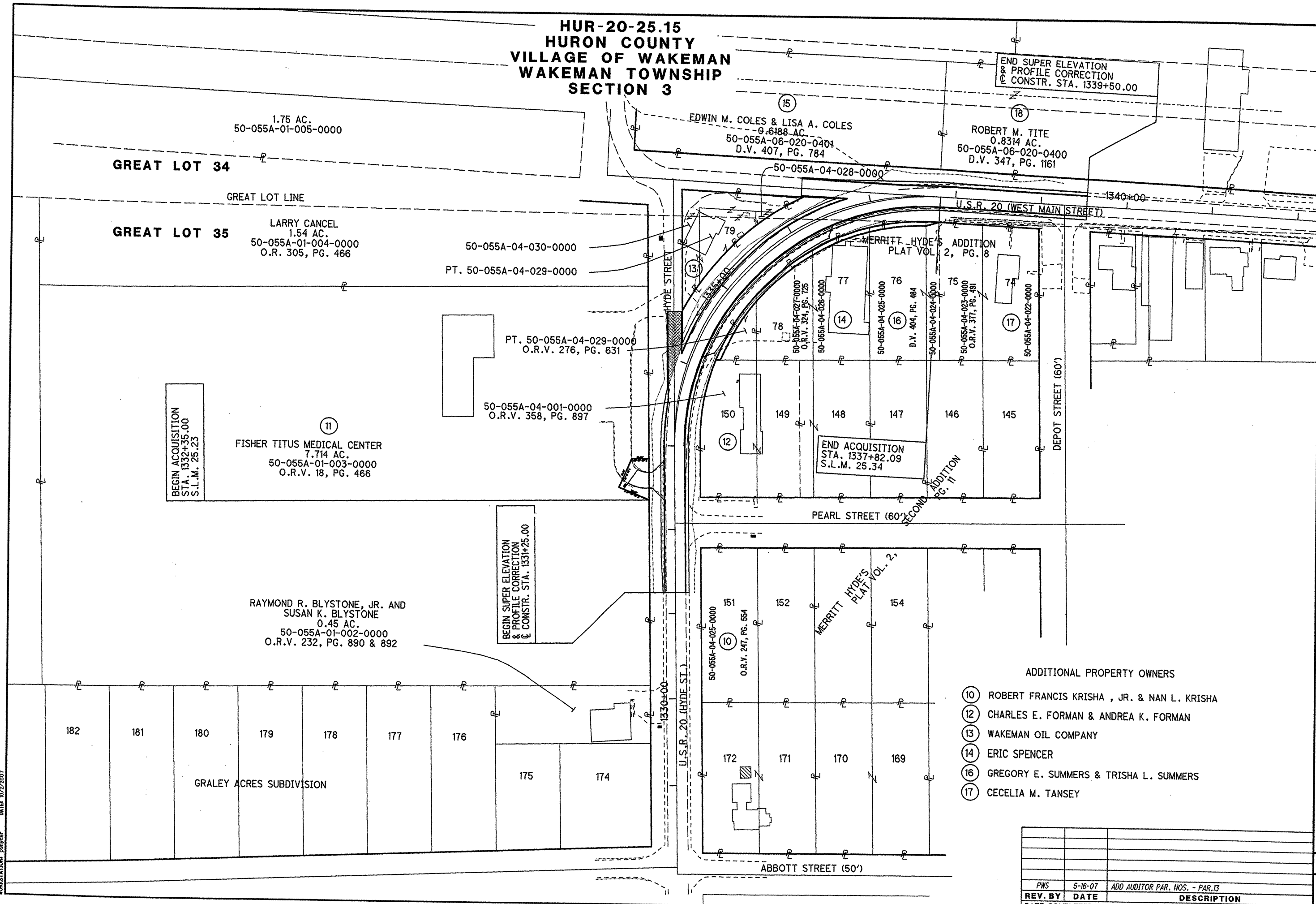
R/W DESIGNER
 PWS
 R/W REVIEWER

PROPERTY MAP

HUR-20-16.35

3 / 10

100
 107



- ADDITIONAL PROPERTY OWNERS
- ⑩ ROBERT FRANCIS KRISHA, JR. & NAN L. KRISHA
 - ⑫ CHARLES E. FORMAN & ANDREA K. FORMAN
 - ⑬ WAKEMAN OIL COMPANY
 - ⑭ ERIC SPENCER
 - ⑯ GREGORY E. SUMMERS & TRISHA L. SUMMERS
 - ⑰ CECELIA M. TANSEY

PWS	5-16-07	ADD AUDITOR PAR. NOS. - PAR.13
REV. BY	DATE	DESCRIPTION
DATE COMPLETED:		12-15-2006

DESIGN FILE: I:\projects\187284\187284.dwg
 WORKSTATION: pswdsc
 DATE: 07/2/2007

TOTAL NUMBER OF :

4 OWNERSHIPS 0 OWNERSHIPS WITH STRUCTURES INVOLVED
 6 PARCELS
 0 TOTAL TAKES

GRANTEE:
 ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
 THE STATE OF OHIO, UNLESS OTHERWISE SHOWN.

AREAS IN ACRES WITH SQUARE FEET IN PARENTHESIS

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL NO.	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED	
			VOLUME	PAGE								LEFT	RIGHT			BOOK	PAGE
1-9	NOT USED																
10	ROBERT FRANCIS KRISHA, JR. & NAN L. KRISHA	2,4	O.R. 247	554	50-055A-05-025-0000	0.2758	-	-	-	-	NONE	-	0.2758		LOT 151 - NO R/W REQUIRED		
11T	FISHER TITUS MEDICAL CENTER	2,4	O.R. 18	466	50-055A-01-003-0000	7.714	-	0.0281	-	0.0281	NONE	7.714	-	STATE	FOR GRADING		
										(1224 S.F.)							
12	CHARLES E. FORMAN & ANDREA K. FORMAN	2,4	O.R. 358	897	50-055A-04-001-0000	0.2363	-	-	-	-	NONE	-	0.2363		LOT 150 - NO R/W REQUIRED		
					50-055A-04-002-0000	0.1894	-	-	-	-	NONE	-	0.1894		LOT 149 - NO R/W REQUIRED		
	TOTAL					0.4257	-	-	-	-			0.4257				
13T	WAKEMAN OIL COMPANY	2,4	D. 276	631	50-055A-04-028-0000	0.0043	-	-	-	-	NONE	0.0043	-		PT. LOT 78 - NO R/W REQUIRED		
					50-055A-04-029-0000	0.1217	-	0.0098	-	0.0098	NONE	0.0749	0.0468	STATE	LOT 79 FOR GRADING		
										(427 S.F.)							
					50-055A-04-030-0000	0.1050	-	-	-	-	NONE	0.1050	-		NO LOT NUMBER - NO R/W REQUIRED		
	TOTAL					0.2310	-	0.0098	-	0.0098		0.1842	0.0468				
14T	ERIC SPENCER	2,4	O.R. 324	725	50-055A-04-027-0000	0.1600	-	0.0098	-	0.0098	NONE	-	0.1600	STATE	PT. LOT 78 FOR GRADING		
14T-1					50-055A-04-026-0000	0.2179	-	0.0082	-	0.0082	NONE	-	0.2179	STATE	LOT 77 FOR GRADING		
										(357 S.F.)							
	TOTAL					0.3779	-	0.0180	-	0.0180		-	0.3779				
15	EDWIN M. COLES & LISA A. COLES	2,4	D. 407	784	50-055A-06-020-0401	0.6188	-	-	-	-	NONE	-	0.6188		NO R/W REQUIRED		
					50-055A-06-020-0501	0.4075	-	-	-	-	NONE	-	0.4075		NO R/W REQUIRED		
	TOTAL					1.0263	-	-	-	-		-	1.0263				
16T	GREGORY E. SUMMERS & TRISHA L. SUMMERS	2,4	D. 404	484	50-055A-04-025-0000	0.2425	-	0.0076	-	0.0076	NONE	-	0.2425	STATE	LOT 76 FOR GRADING		
16T-1					50-055A-04-024-0000	0.0571	-	0.0009	-	0.0009	NONE	-	0.0571	STATE	PT. LOT 75 FOR GRADING		
										(39 S.F.)							
	TOTAL					0.2996	-	0.0085	-	0.0085		-	0.2996				
17	CECELIA M. TANSEY	2,4	D. 377	491	50-055A-04-023-0000	0.1860	-	-	-	-	NONE	-	0.1860		PT. LOT 75 - NO R/W REQUIRED		
					50-055A-04-022-0000	0.2370	-	-	-	-	NONE	-	0.2370		LOT 74 - NO R/W REQUIRED		
	TOTAL					0.4030	-	-	-	-		-	0.4030				
18	ROBERT M. TITE	2,4	D. 347	1161	50-055A-06-020-0400	0.8314	-	-	-	-	NONE	0.8314	-		NO R/W REQUIRED		

FEDERAL PROJECT NO. 77284
 PID NO. 77284
 STATE JOB NO. 437117
SUMMARY OF ADDITIONAL RIGHT OF WAY
 HUR-20-16.35

LEGEND:

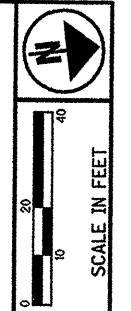
WL = FEE SIMPLE WITH LIMITATION OF ACCESS
 WD = WARRANTY DEED
 SH = STANDARD HIGHWAY EASEMENT
 T = TEMPORARY EASEMENT

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

REV. BY	DATE	DESCRIPTION
PWS	5-16-07	ADD AUDITOR PAR. NOS., ADJUSTED RECORD AREAS - PAR. 13
DATE COMPLETED:		12-15-2006

HUR-20-25.15
 HURON COUNTY
 VILLAGE OF WAKEMAN
 WAKEMAN TOWNSHIP
 SECTION 3, GREAT LOT 35



11
 FISHER TITUS MEDICAL CENTER
 7.714 AC.
 50-055A-01-003-0000
 O.R.V. 18, PG. 466

BEGIN ACQUISITION
 STA. 1332+35.00
 S.L.M. 25.23

BEGIN SUPERELEVATION
 & PROFILE CORRECTION
 STA. 1331+25.00

1 STY.
 FR. RES.
 # 30

50-055A-04-030-0000

S 0° 52' 54" E

ASPHALT
 PARKING
 AREA
 6 SPACES

PTD NO.
 77284

R/W DESIGNER
 PWS
 R/W REVIEWER

RIGHT OF WAY PLAN
 STA. 1330+00 TO STA. 1335+00

HUR-20-16.35

5/10
 102
 107

1330+00
 N 0° 52' 54" W

1331+00
 R/W & CONSTR. U.S.R. 20

1332+00

1333+00

1334+00

R/W HYDE ST.
 N 0° 52' 54" W
 R/W U.S.R. 20
 CONSTR. U.S.R. 20

US 20
 MATCH LINE STA. 1335+00

10
 ROBERT FRANCIS KRISHA, JR.
 AND NAN L. KRISHA
 50-055A-05-025-0000
 O.R.V. 247, PG. 554
 NO R/W REQ'D.
 13 - 2" TREES

ROBERT KRISHA, JR.
 AND NAN KRISHA
 50-055A-05-024-0000
 D.V. 329, PG. 1150

50-055A-04-001-0000
 LOT 150

2 STY.
 FR. RES.
 # 56
 GAR.

50-055A-04-002-0000
 LOT 149

50-055A-04-003-0000

50-055A-04-004-0000
 LOT 148

13T
 LOT 79

LOT 78

13
 WAKEMAN OIL COMPANY
 PT. 50-055A-04-029-0000
 D.V. 276, PG. 631

14
 ERIC SPENCER
 50-055A-04-027-0000
 O.R.V. 324, PG. 725

12
 CHARLES E. FORMAN AND
 ANDREA K. FORMAN
 50-055A-04-001-0000
 O.R.V. 358, PG. 897
 NO R/W REQUIRED

CURVE DATA
 R/W U.S.R. 20
 P.I. STA. 1336+12.95
 Δ = 93° 34' 10" (RT)
 Dc = 19° 53' 55"
 R = 287.94'
 T = 306.46'
 L = 470.23'
 E = 132.57'
 CH = N 45° 54' 11" E, 419.69'

REV. BY	DATE	DESCRIPTION
PWS	5-16-07	ADD AUDITOR PAR. NOS. - PAR. 13
DATE COMPLETED:		12-15-2006

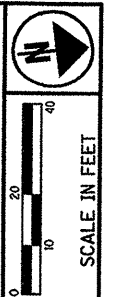
DESIGN FILE: I:\projects\77284\77284R001.dgn
 WORKSTATION: psnyder
 DATE: 10/2/2007

**HUR-20-25.15
HURON COUNTY
VILLAGE OF WAKEMAN
WAKEMAN TOWNSHIP
SECTION 3, GREAT LOT 35**

**CURVE DATA
TEMP. R/W TAKES**

CURVE 1
 $\Delta = 19^\circ 59' 49''$ (RT)
 $Dc = 22^\circ 12' 46''$
 $R = 257.94'$
 $T = 45.47'$
 $L = 90.02'$
 $CH = N 31^\circ 02' 08'' E, 89.57'$

CURVE 2
 $\Delta = 18^\circ 15' 58''$ (LT)
 $Dc = 22^\circ 39' 07''$
 $R = 252.94'$
 $T = 40.66'$
 $L = 80.64'$
 $CH = S 30^\circ 37' 25'' W, 80.30'$



PID NO.
77284

C/W DESIGNER
PWS
R/W REVIEWER

**RIGHT OF WAY PLAN BOUNDARY SHEET
STA. 1330+00 TO STA. 1335+00**

HUR-20-16.35

6 / 10

103
107

11
FISHER TITUS MEDICAL CENTER
7.714 AC.
50-055A-01-003-0000
O.R.V. 18, PG. 466

PT. 50-055A-04-030-0000

1 STY. FR. RES. # 30
5/8" IRON PIN FD. W/ CAP " SPENCER
P.L.S. 8561
1329+48.18
30.20'

1" IRON PIPE FD.
1330+16.06
30.32'

1332+50.00
65.00'

1332+85.00
50.00'

N 89° 07' 06" E
20.00'

1332+85.00
30.00'

S 0° 52' 54" E

1332+35.00
30.00'

N 67° 40' 59" E
38.08'

N 67° 40' 59" W
38.08'

50.00'

1330+00
N 0° 52' 54" W

1331+00
R/W & CONSTR. U.S.R. 20

P.I. 1332+07.99

1333+00

5/8" IRON PIN FD.
1334+15.58
29.66'

1334+00

R/W U.S.R. 20
CONSTR. U.S.R. 20

1/2" IRON PIN FD.
1329+95.66
30.19'

10
ROBERT FRANCIS KRISHA, JR.
AND NAN L. KRISHA
50-055A-05-025-0000
O.R.V. 247, PG. 554
NO R/W REQ'D.

LOT 151

ROBERT KRISHA, JR.
AND NAN KRISHA
50-055A-05-024-0000
D.V. 329, PG. 1150

LOT 152

1/2" IRON PIN FD.

LOT 153

R/W PEARL STREET (60')

N 89° 15' 17" E

**CURVE DATA
R/W U.S.R. 20**
P.I. STA. 1336+12.95
 $\Delta = 93^\circ 34' 10''$ (RT)
 $Dc = 19^\circ 53' 55''$
 $R = 287.94'$
 $T = 306.46'$
 $L = 470.23'$
 $E = 132.57'$
 $CH = N 45^\circ 54' 11'' E, 419.69'$

50-055A-04-002-0000
LOT 149

1" IRON PIPE FD.

50-055A-04-003-0000

LOT 150

2 STY. FR. RES. # 56

GAR.

1334+18.92
35.00'

LOT 79

LOT 78

LOT 13

WAKEMAN OIL COMPANY
PT. 50-055A-04-029-0000
D.V. 276, PG. 631

LOT 14

ERIC SPENCER
50-055A-04-027-0000
O.R.V. 324, PG. 725

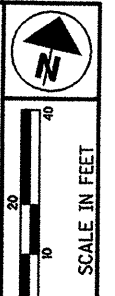
LOT 12

CHARLES E. FORMAN AND
ANDREA K. FORMAN
50-055A-04-001-0000
O.R.V. 358, PG. 897
NO R/W REQUIRED

PWS	5-16-07	ADD AUDITOR PAR. NOS. - PAR. 13
REV. BY	DATE	DESCRIPTION
DATE COMPLETED:		12-15-2006

DESIGN FILE: h:\p\o\fact\877284\BRM\77284R002.dgn
WORKSTATION: psw\pdr DATE: 10/22/2007

HUR-20-25.15
HURON COUNTY
VILLAGE OF WAKEMAN
WAKEMAN TOWNSHIP
SECTION 3



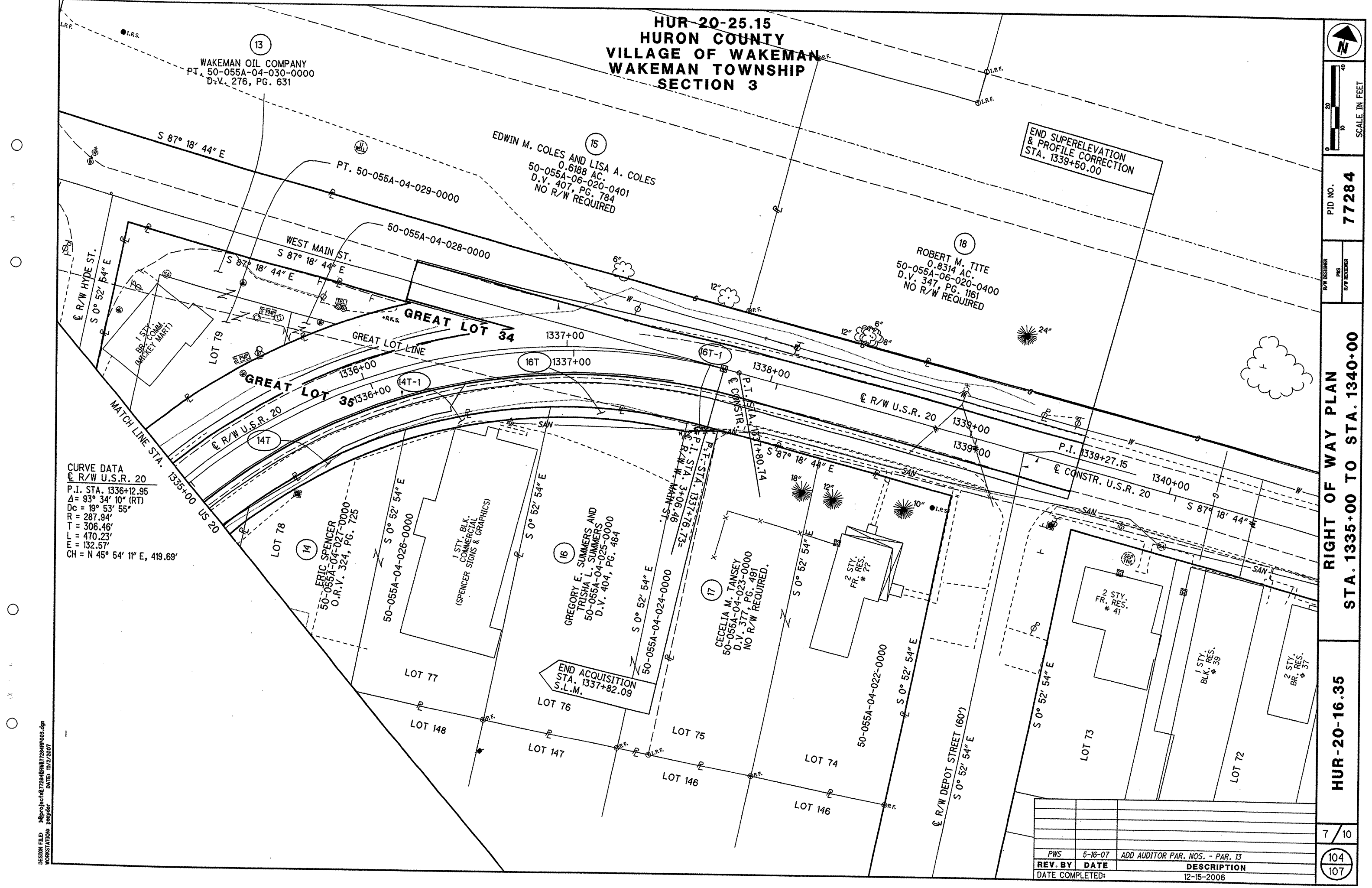
WAKEMAN OIL COMPANY
 PT. 50-055A-04-030-0000
 D.V. 276, PG. 631

EDWIN M. COLES AND LISA A. COLES
 0.6188 AC.
 50-055A-06-020-0401
 D.V. 407, PG. 784
 NO R/W REQUIRED

ROBERT M. TITE
 0.8314 AC.
 50-055A-06-020-0400
 D.V. 347, PG. 1161
 NO R/W REQUIRED

END SUPERELEVATION
 & PROFILE CORRECTION
 STA. 1339+50.00

CURVE DATA
 C/R/W U.S.R. 20
 P.I. STA. 1336+12.95
 $\Delta = 93^\circ 34' 10''$ (RT)
 $D_c = 19^\circ 53' 55''$
 $R = 287.94'$
 $T = 306.46'$
 $L = 470.23'$
 $E = 132.57'$
 $CH = N 45^\circ 54' 11'' E, 419.69'$



PID NO.
77284

RIGHT OF WAY PLAN
STA. 1335+00 TO STA. 1340+00

HUR-20-16.35

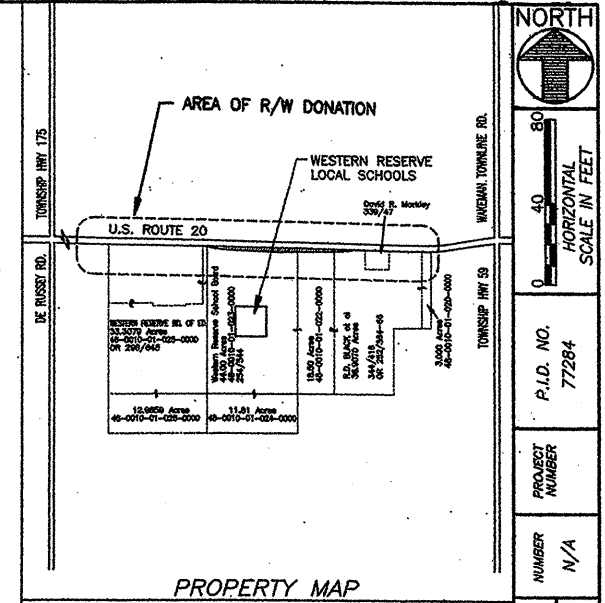
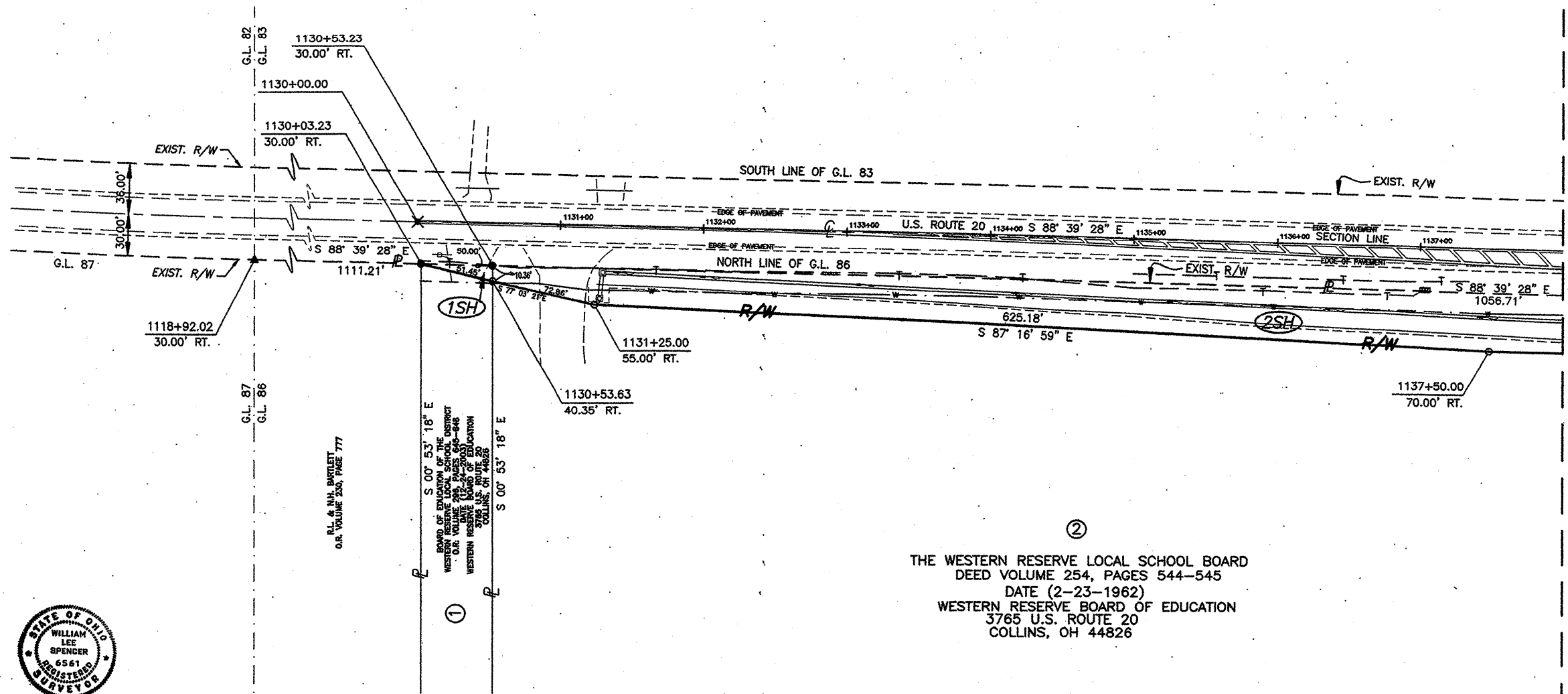
7 / 10

REV. BY	DATE	DESCRIPTION
PWS	5-16-07	ADD AUDITOR PAR. NOS. - PAR. 13
DATE COMPLETED:		12-15-2006

104
 107

DESIGN FILE: I:\projects\77284\77284R003.dwg
 WORKSTATION: pnydwr DATE: 10/2/2007

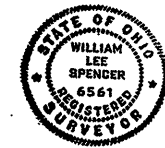
HUR-20-21.40
 HURON COUNTY, OHIO
 TOWNSEND TOWNSHIP, SECTION 1
 GREAT LOTS 85 & 86
 T-4N, R-21W



MONUMENT LEGEND & CONVENTIONAL SIGNS

- ORIGINAL LOT LINE ———
- RIGHT-OF-WAY ——— R/W ———
- EXISTING RIGHT-OF-WAY ——— EXIST. R/W ———
- CENTER LINE ——— C ———
- PROPERTY LINE ——— P ———
- 5/8" IPIN w/CAP FOUND (KELSER No.7871) — ▲
- 5/8" IPIN w/CAP FOUND (RILEY No.6925) — ●
- 5/8" IPIN w/CAP FOUND (W.SPENCER No.6561) ●
- 5/8" IPIN w/CAP SET (W.SPENCER No.6561) — ○
- SURVEY MARKER FOUND ——— X

②
 THE WESTERN RESERVE LOCAL SCHOOL BOARD
 DEED VOLUME 254, PAGES 544-545
 DATE (2-23-1962)
 WESTERN RESERVE BOARD OF EDUCATION
 3765 U.S. ROUTE 20
 COLLINS, OH 44826



William L. Spencer, Surveyor
 THE ESTABLISHMENT OF THE PROPERTY LINES AND BOUNDARIES FOR "WESTERN RESERVE SCHOOL BOARD" AS SHOWN HEREON ARE BASED UPON A BRANCH SURVEY FOR THE WESTERN RESERVE SCHOOL BOARD DATED FEBRUARY 8, 2006 BY WILLIAM L. SPENCER. DISTANCES ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF. BEARINGS ARE REFERENCED TO AN ASSUMED MERIDIAN AND ARE USED TO INDICATE ANGLES ONLY.
 *INDICATES IRON MONUMENTS TO BE SET (5/8" DIA. BY 30" LONG REBAR PER HURON COUNTY ENGINEER). IRON PINS ARE TO BE SET (5/8" DIA. BY 30" LONG REBAR WITH IDENTIFICATION W/SPENCER 6561) AT ALL PROPERTY CORNERS. ALL OF THE ABOVE IS CORRECT TO MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF.

William L. Spencer
 WILLIAM LEE SPENCER
 REG. SURVEYOR NO. 6561

RECEIVED _____, 2006
 RECORDED _____, 2006
 DOCUMENT No. _____

 COUNTY RECORDER

NOTE:
 THE BEARINGS REFERENCED HEREIN ARE RELATIVE TO AN ASSUMED MERIDIAN AND ARE FOR INDICATING DIRECTIONAL VARIATION FOR THIS PROJECT ONLY

REF., ROAD RECORDS
 BK 1, PG 163
 BK 3, PG 105
 FOR STATE ROAD TO BE LAYED OUT FROM EAST OF NORWALK THROUGH HURON AND LORAIN COUNTY AGREEABLE TO AN ACT PASSED FEB. 19th A.D. 1833 BY THE LEGISLATURE OF THE STATE OF OHIO.

REV. BY	DATE	DESCRIPTION

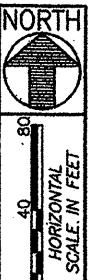
TOTAL NUMBER OF:
 3 OWNERSHIPS 0 OWNERSHIPS WITH STRUCTURES INVOLVED
 4 PARCELS 0 OWNERSHIPS WITH "P" ITEMS
 0 TOTAL TAKES

SUMMARY OF ADDITIONAL RIGHT OF WAY
 NET RESIDUE = RECORD AREA - TOTAL P.R.O. - NET TAKE
 AREA IN ACRES

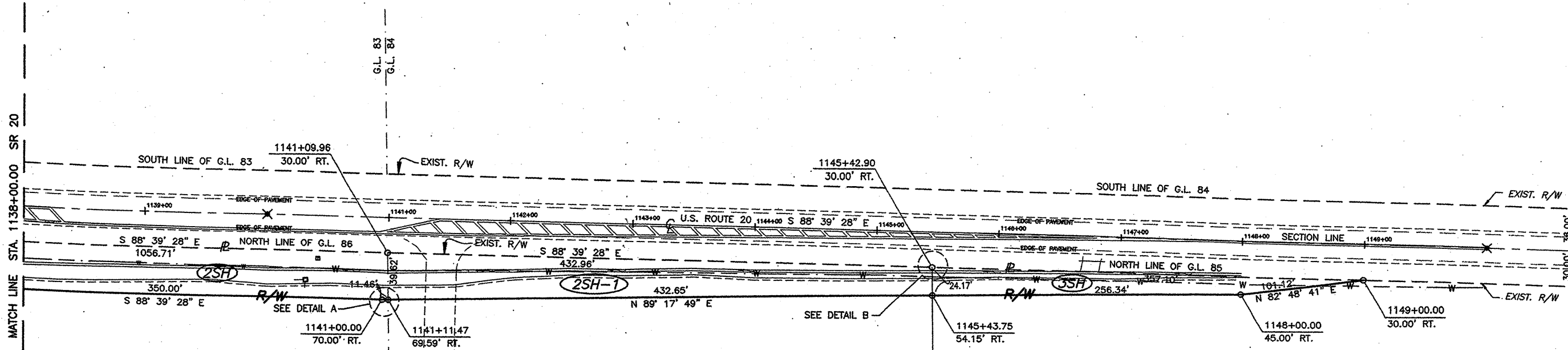
PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA (AC.)	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS AND PERSONALITY	AS ACQUIRED DOCUMENT No.
			BOOK	PAGE								LEFT	RIGHT			
1 SH	BOARD OF EDUCATION OF THE WESTERN RESERVE LOCAL SCHOOL DISTRICT		O.R.V. 296	645-648	48-0010-01-025-0000	33.3079	0.000	0.0059	0.000	0.0059			33.3020			
					48-0010-01-026-0000	12.6659	0.000	0.000	0.000	0.000			12.6659			
2 SH	THE WESTERN RESERVE LOCAL SCHOOL BOARD		D.V. 254	544-545	48-0010-01-023-0000	44.00	0.000	0.8265	0.000	0.8265			43.1735			
					48-0010-01-024-0000	11.81	0.000	0.000	0.000	0.000			11.81			
2 SH-1					48-0010-01-022-0000	18.50	0.000	0.3168	0.000	0.3168			18.1832			
3 SH	RICHARD D. BLACK AND MARJORIE B. BLACK (2/3 INTEREST)		O.R.V. 252	364-367	48-0010-01-021-0000	36.9079	0.000	0.1326	0.000	0.1326			36.7753			
					48-0010-01-020-0000	3.000	0.000	0.000	0.000	0.000			3.00			
	WILLIAM T. BLACK (1/3 INTEREST)		D.V. 344	416-417												

NORTH
 HORIZONTAL SCALE IN FEET
 P.I.D. NO. 77284
 PROJECT NUMBER N/A
 NUMBER N/A
 R/W DESIGNER
 R/W REVIEWER
 RIGHT-OF-WAY PLAN
 HUR-20-21.40
 1/2
 9/10
 106/107

HUR-20-21.40
 HURON COUNTY, OHIO
 TOWNSEND TOWNSHIP, SECTION 1
 GREAT LOTS 85 & 86
 T-4N, R-21W



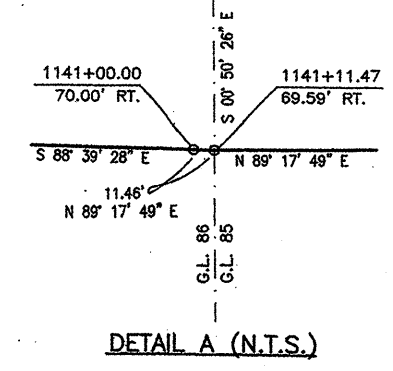
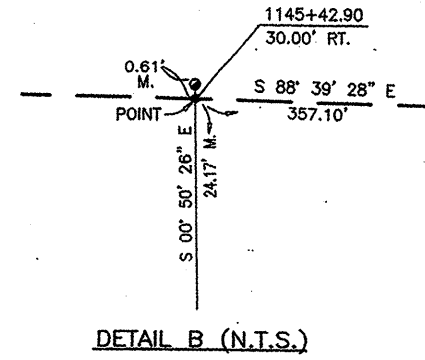
P.I.D. NO. 77284
 PROJECT NUMBER N/A
 NUMBER N/A
 R/W DESIGNER R/W REVIEWER



②
 THE WESTERN RESERVE LOCAL SCHOOL BOARD
 VOL. 254, PAGE 544-545
 DATE (2-23-1962)
 WESTERN RESERVE BOARD OF EDUCATION
 3765 U.S. ROUTE 20
 COLLINS, OH 44826

②
 THE WESTERN RESERVE LOCAL SCHOOL BOARD
 VOL. 254, PAGES 544-545
 DATE (2-23-1962)
 WESTERN RESERVE BOARD OF EDUCATION
 3765 U.S. ROUTE 20
 COLLINS, OH 44826

③
 WILLIAM T. BLACK
 DEED VOLUME 344, PAGES 416-417
 DATE (9-12-1980)
 1306 WESTVIEW ROAD
 NORMAL, ILLINOIS
 RICHARD D. AND MARJORIE B. BLACK
 O.R. VOLUME 252, PAGES 364-367
 DATE (6-18-2003)
 2814 SUMMERFIELD ROAD
 WINTER HAVEN, FLORIDA 32972



RECEIVED _____, 2006
 RECORDED _____, 2006
 DOCUMENT No. _____
 COUNTY RECORDER

REV. BY	DATE	DESCRIPTION

RIGHT-OF-WAY PLAN

HUR-20-21.40

2/2
 10/10
 107/107