

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

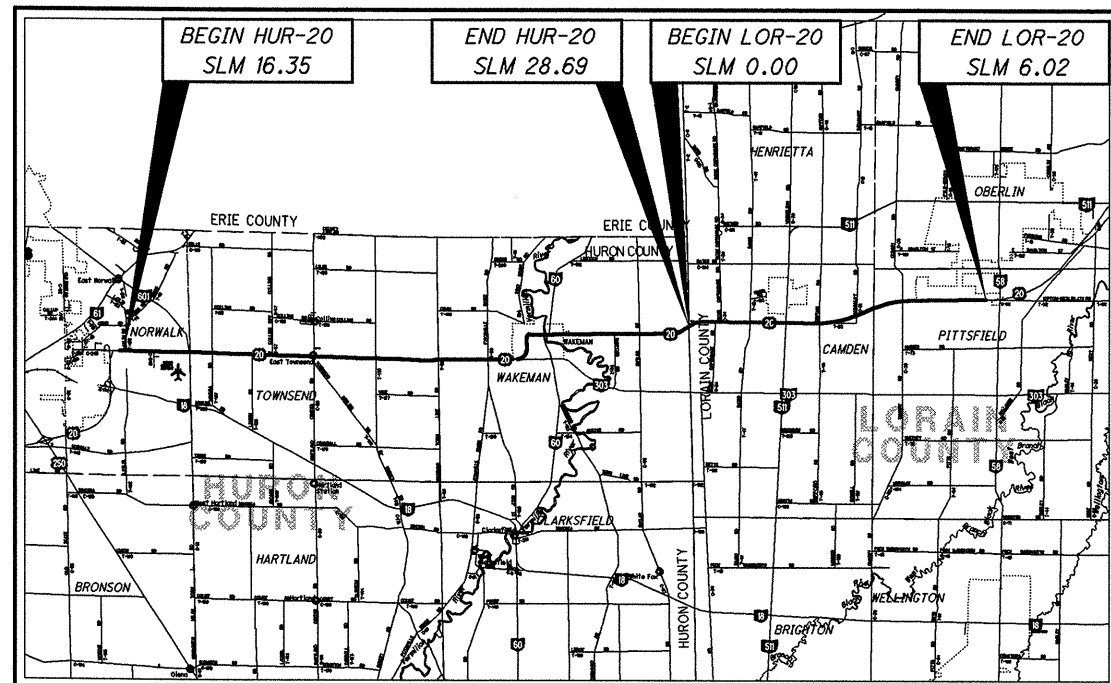
PROJECT DESCRIPTION

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

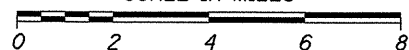
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



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

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ENGINEERS SEAL:

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

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

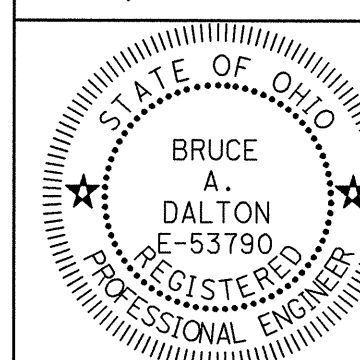
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

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

PLAN PREPARED BY:



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			



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

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 10/14/07 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**

1/107

DESIGN FILE: I:\projects\77284\77284GT001.dgn
WORKSTATION: mrobins1 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

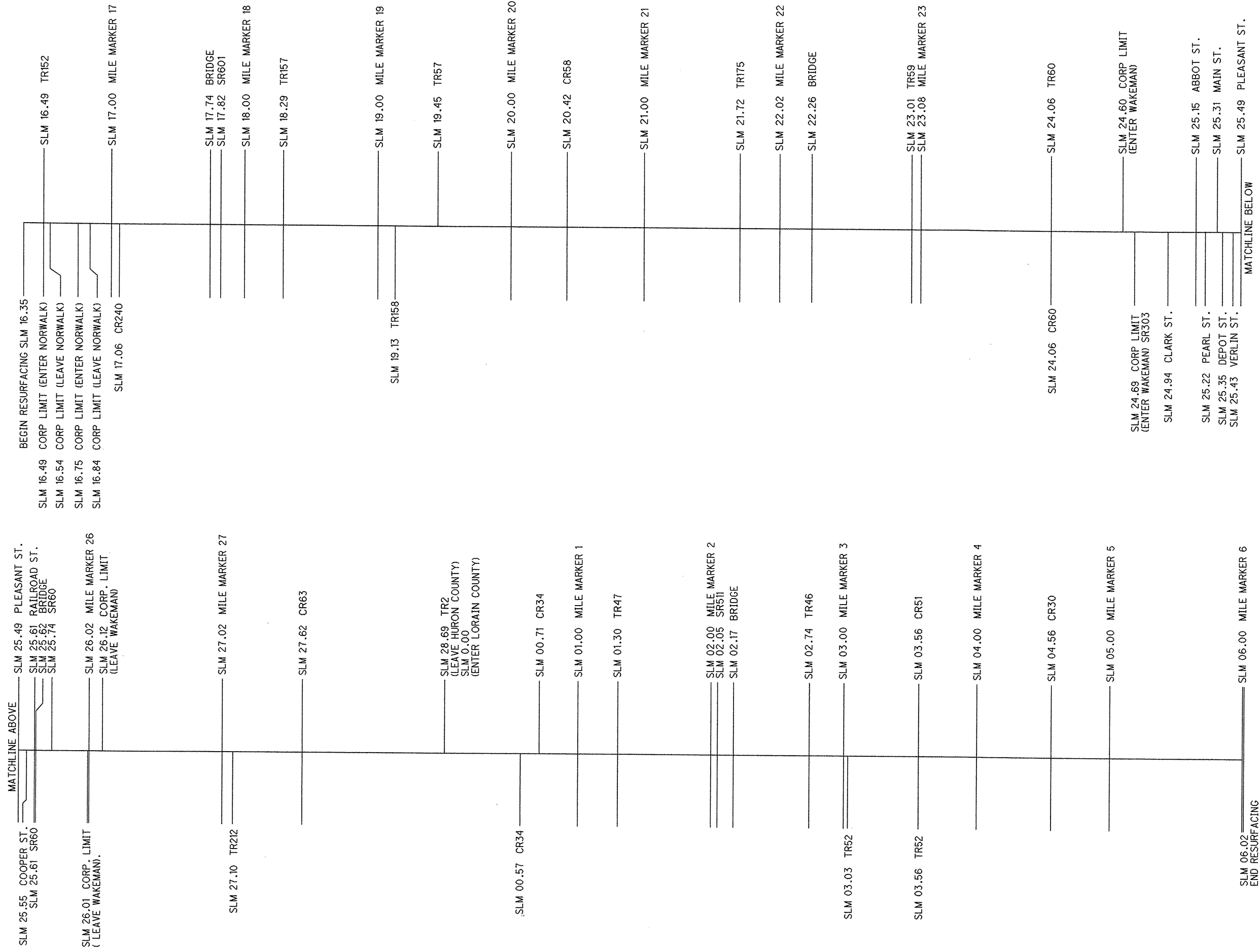
HUR US 20
DESIGN DESIGNATION (ENGLISH UNITS)
 SLM 25.61 TO 25.74
 CURRENT ADT (2008) 7850
 DESIGN ADT (2020) 9290
 DESIGN HOURLY VOLUME 840
 DIRECTIONAL DISTRIBUTION 51%
 TRUCKS (24 HOUR B&C) 0.28
 DESIGN SPEED/LEGAL SPEED 24.69-25.61 35 MPH
 DESIGN FUNCTIONAL CLASSIFICATION: Rural Principal Arterial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



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

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

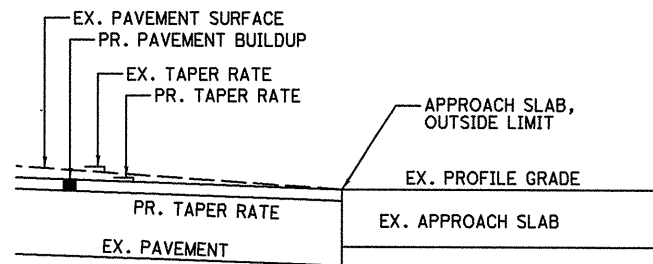
THE CONTRACTOR SHALL CORRECT THE PAVEMENT PROFILE WITH THE RESURFACING OPERATIONS WHILE ENSURING A SMOOTH TRANSITION FROM THE PROPOSED TREATMENT ON THE APPROACH SLABS (OUTSIDE LIMITS) TO THE PROPOSED ROADWAY PAVEMENT BUILDUP.

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.

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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 ERECT 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 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.

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 ERECTED 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

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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

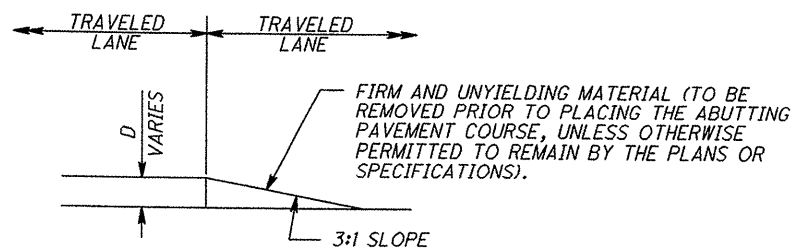
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 107

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 ENCRoACH 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



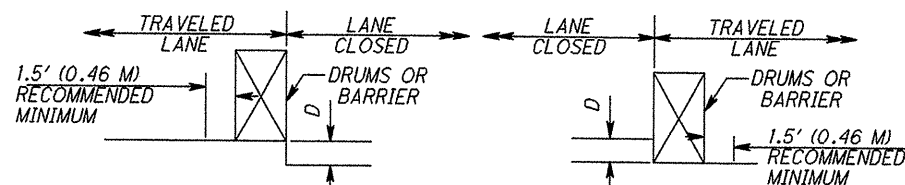
CONDITION I

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

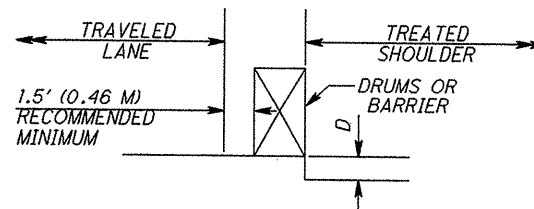
DROP-OFFS WITHIN GRADED SHOULDER AREA

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)).

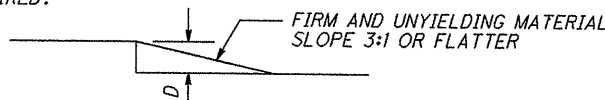
D	TREATMENT
$< 1/2"$ (< 40)	ERECT W8-9A SIGNS
$> 1/2"$ -5" (> 40 -125)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS OR 3. OPTIONAL SHOULDER TREATMENT
$> 5"$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



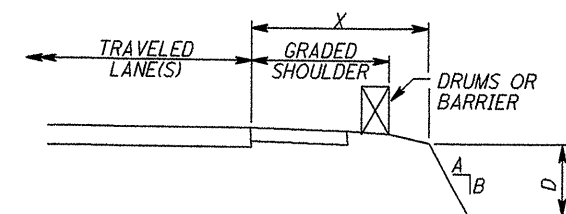
CONDITION III

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)

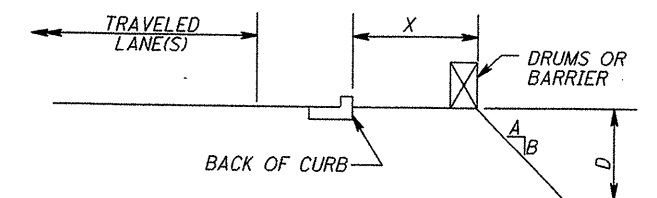


X	D	A/B	Treatment Required	
			Day	Night
0-4' (0-1.2 M)	ANY	ANY	(A)	(A)
4'-30' (1.2 M-9.1 M)	ANY	3:1 OR FLATTER	NONE	NONE
4'-12' (1.2 M-3.6 M)	$\leq 3"$ (≤ 75)	STEEPER THAN 3:1	NONE	NONE
4'-12' (1.2 M-3.6 M)	$> 3"$ - $\leq 12"$ (> 75 - ≤ 305)	STEEPER THAN 3:1	DRUMS	DRUMS
4'-12' (1.2 M-3.6 M)	$> 12"$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

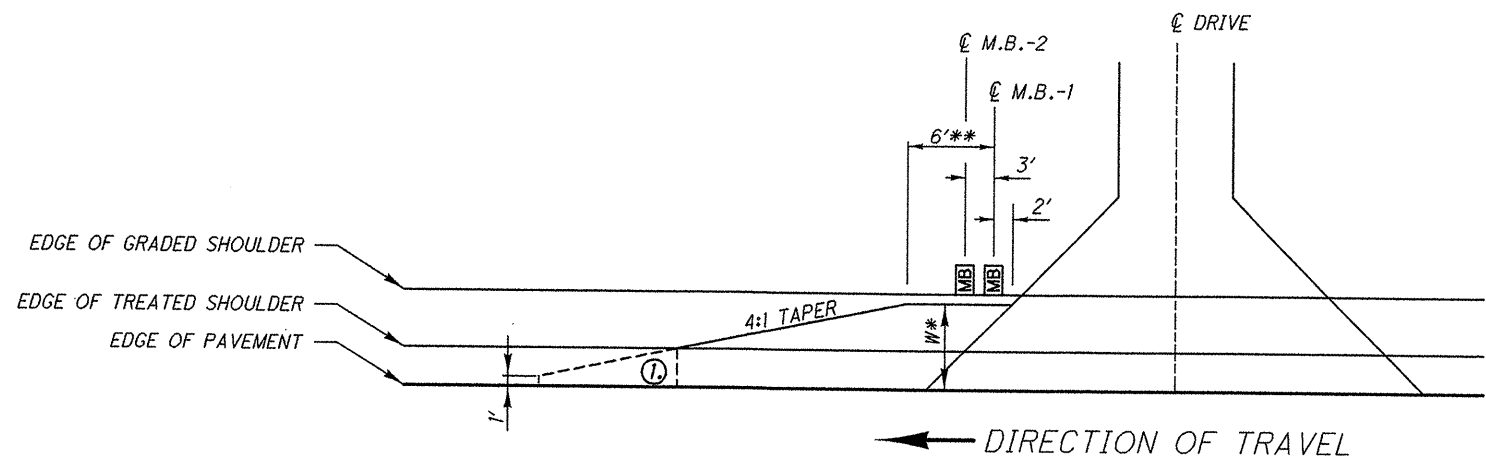
ITEM 209 - GRADING MAILBOX APPROACHES:	
HURON	28 EACH
LORAIN	12 EACH
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN	
HURON	56 CU YD
LORAIN	24 CU YD

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	

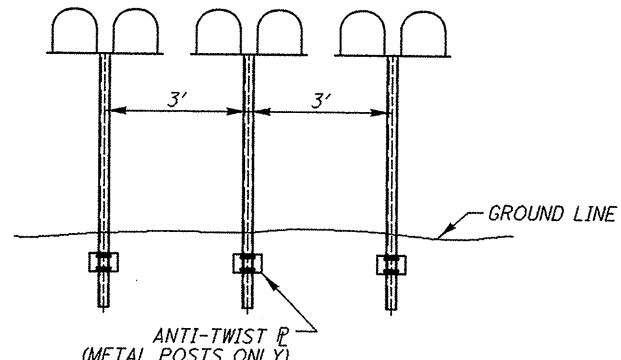
FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



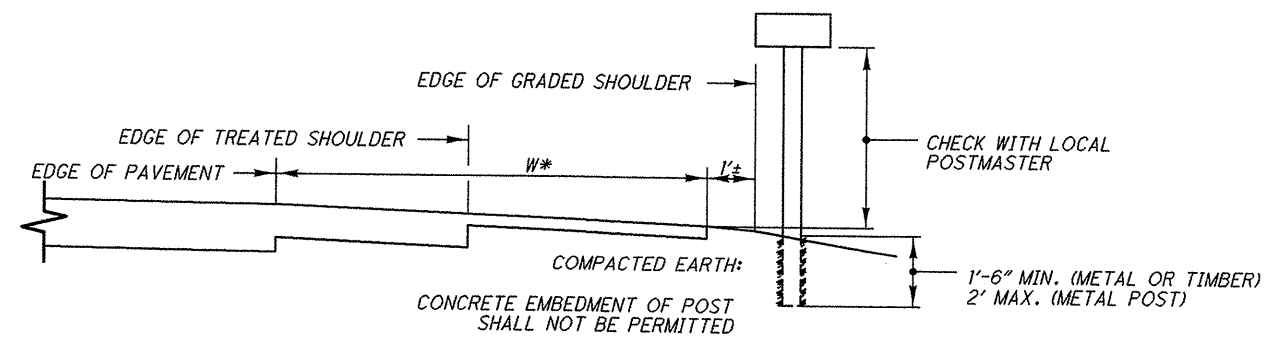
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

- 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.

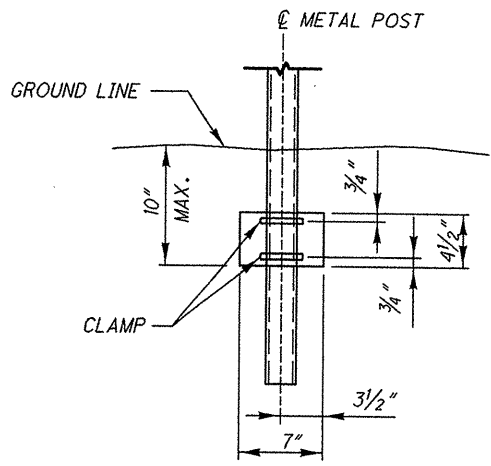
** NOTE
1) 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX.



GROUP MAILBOX INSTALLATION



CROSS SECTION / ELEVATION VIEW



ANTI-TWIST PLATE

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

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	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

CALC BY
MER

CHKD BY
BAD

PATRICIPANION	ROUTE	LOG POINT TO LOG POINT STRAIGHT LINE MILEAGE		LENGTH		WIDTH FEET AVG.	* TYPICAL	PAVEMENT AREA SQ YD	254			407	407	442		442		442		442		604		AGGREGATE SHOULDER PROPOSED WIDTH	AGGREGATE SHOULDER AREA	209 LINEAR GRADING	408 PRIME COAT @ 0.40 GAL/SY	617 COMPACTED AGGREGATE, AS PER PLAN	617 SHOULDER PREPARATION							
				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	SL	SR	1.5 INCHES AVG. THICKNESS															
									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									
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

13

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* - FOR TYPICALS, SEE SHEET 15

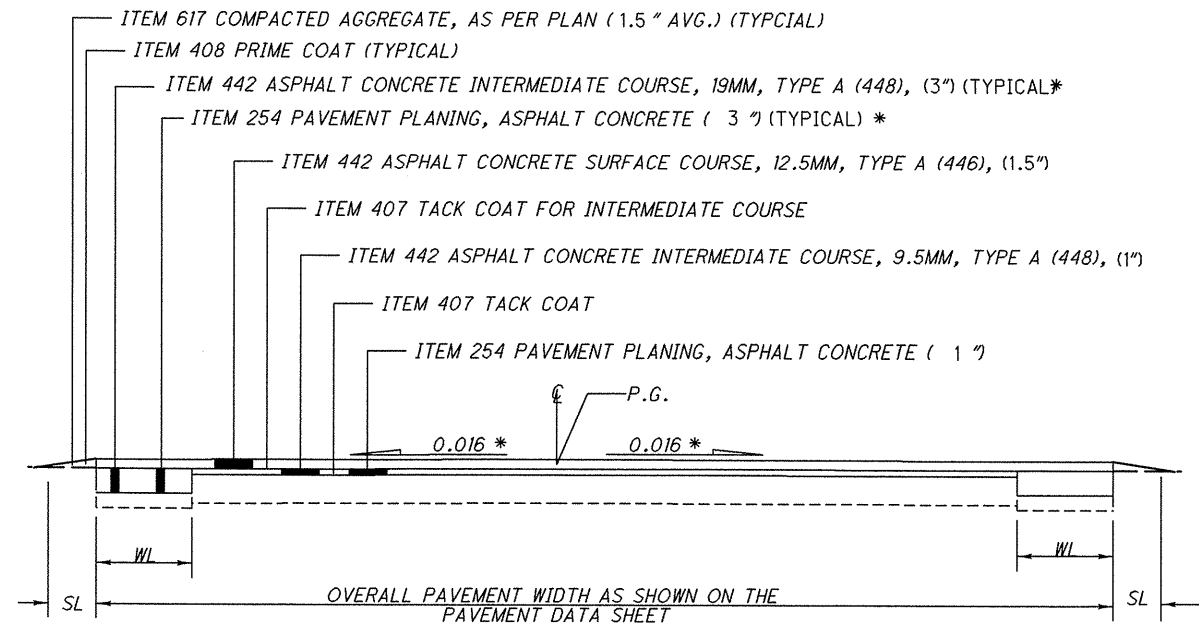
PATRICIPANION	ROUTE	LOG POINT TO LOG POINT STRAIGHT LINE MILEAGE		LENGTH		WIDTH FEET AVG.	* T Y P I C A L	PAVEMENT AREA SQ YD	254			407	407	442		442		604	AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA	209	408	617	617	
				MILE	FEET				PAVEMENT PLANING, ASPHALT CONCRETE (1.00")	PATCHING PLANED 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			
													SQ.YD		SQ.YD									GALLON	GALLON	INCH
				1.5 INCHES AVG. THICKNESS																						
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
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

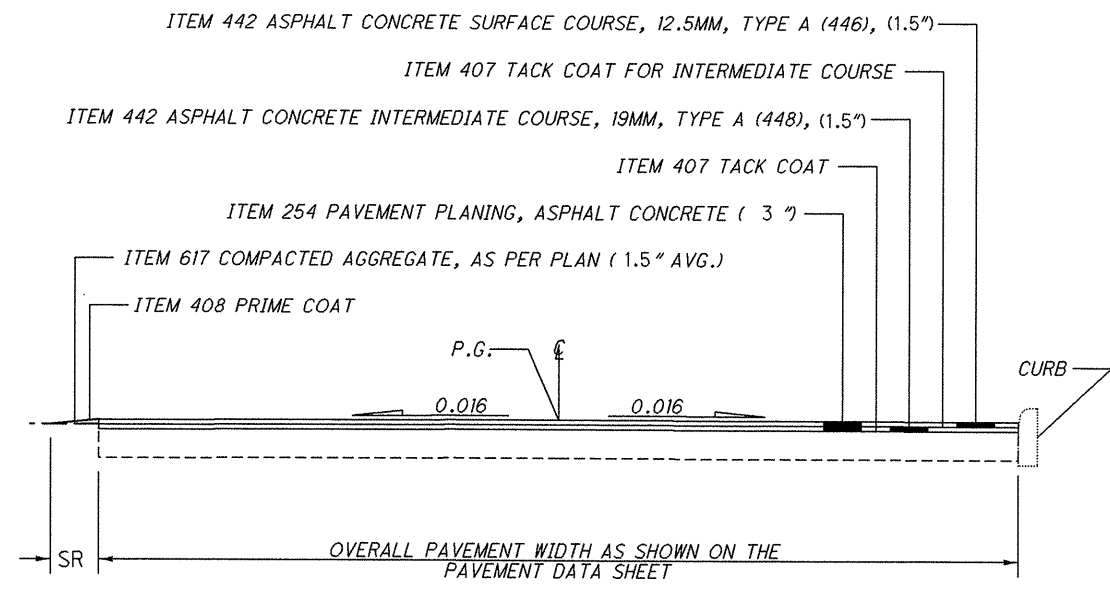
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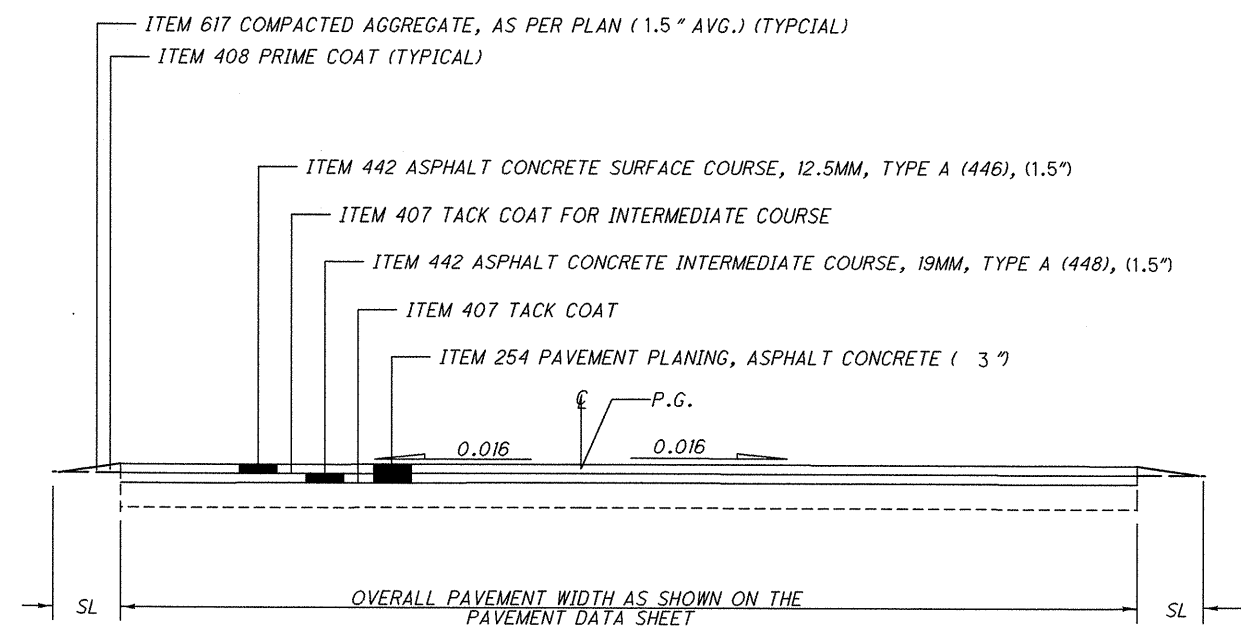


TYPICAL 1

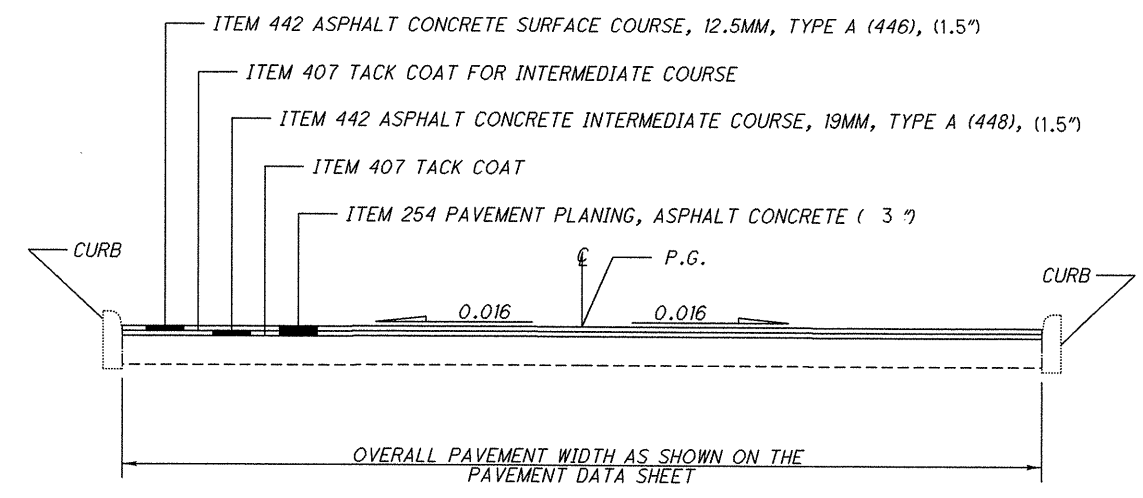
* AS DIRECTED BY THE PROJECT ENGINEER.



TYPICAL 3



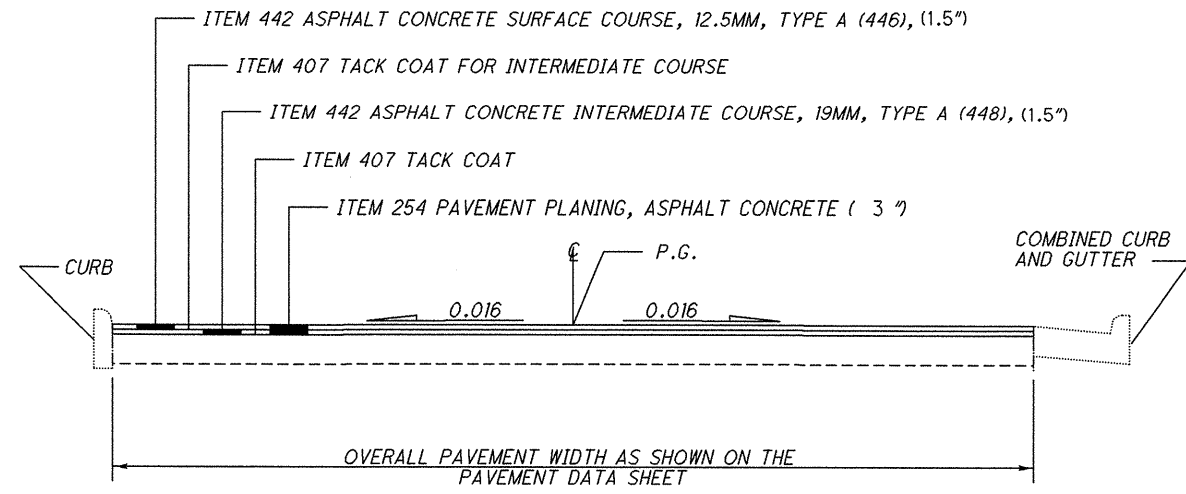
TYPICAL 2



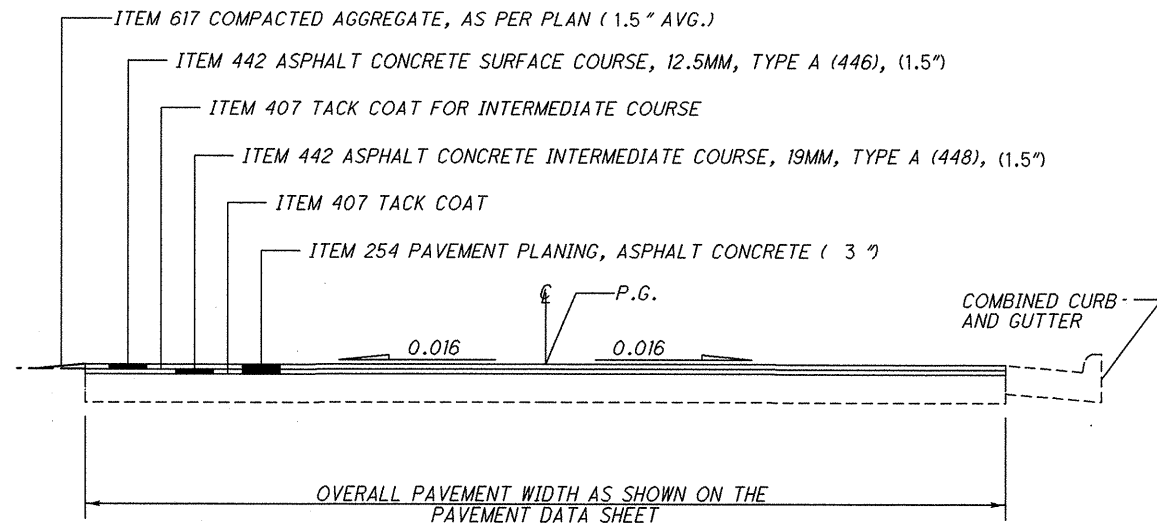
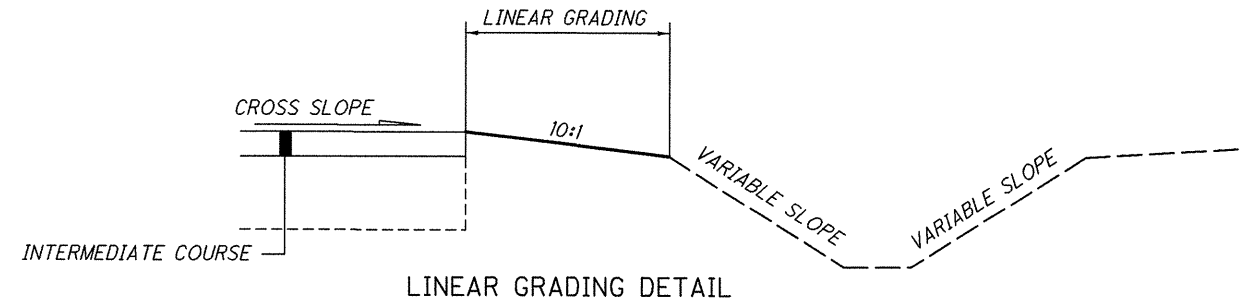
TYPICAL 4

DESIGN FILE: i:\projects\77284\77284GY005.dgn
WORKSTATION: mrobinst
DATE: 10/12/2007

DESIGN FILE: I:\projects\77284\77284GY005.dgn
 WORKSTATION: mrobins1 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.

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TYPICAL SECTIONS

HUR-20-16.35
 LOR-20-0.00

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

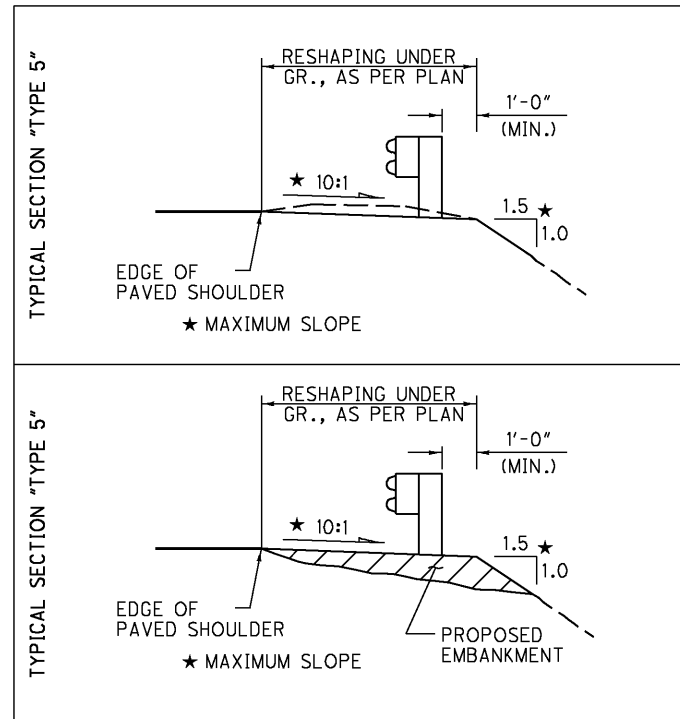
THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

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

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GUARDRAIL NOTES

HUR-20-16.35
LOR-20-0.00

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.

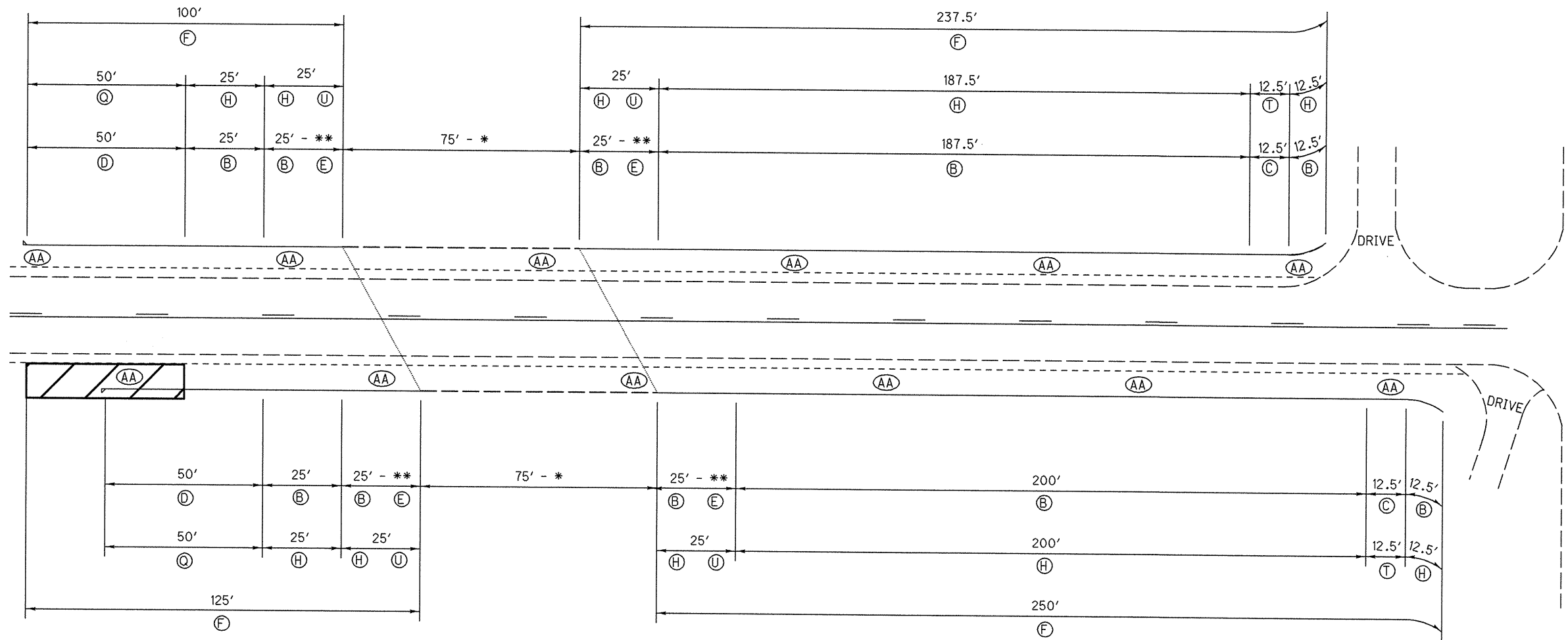
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY REBUILT, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, 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	626					626
GUARDRAIL REMOVED	GUARDRAIL REMOVED FOR REUSE	ANCHOR ASSEMBLY REMOVED FOR REUSE	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	ANCHOR ASSEMBLY REMOVED	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	GUARDRAIL POST REMOVED	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE B-98	EXCAVATION, AS PER PLAN	EMBANKMENT, AS PER PLAN	RESHAPING UNDER GUARDRAIL, AS PER PLAN	GUARDRAIL, TYPE 5	GUARDRAIL REBUILT, TYPE 5	GUARDRAIL, TYPE 5, LONG-SPAN	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY REBUILT, TYPE E-98	ANCHOR ASSEMBLY, TYPE A	ANCHOR ASSEMBLY, TYPE T	ANCHOR ASSEMBLY REBUILT, TYPE T	ANCHOR ASSEMBLY REBUILT, TYPE B-98	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4	BRIDGE TERMINAL ASSEMBLY, TYPE 1	BRIDGE TERMINAL ASSEMBLY, TYPE 4	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5	GUARDRAIL POST	BARRIER REFLECTOR, TYPE A	BARRIER REFLECTOR, TYPE B	MANHOLE ADJUSTED TO GRADE	CATCH BASIN ADJUSTED TO GRADE	INLET ADJUSTED TO GRADE	VALVE BOX ADJUSTED TO GRADE				
FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	CY	CY	STATION	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
HURON																																			
17.74	562.50	2	2		4			10	7.13			562.50																							
22.27	268.75	1	3					25	50	5.19	37.50	268.75		2	3							4							12						
22.84	271.88		3	1				15	85	5.88	350.00			3		1						4							8						
24.50	312.50		4					25	65	7.50	450.00			4								4							10						
25.63	37.50	87.50	2						10	2.75	62.50	87.50		2								3		1	25			7	8						
LORAIN																																			
2.21	275.0					4	2			4.19		275.00										4				4			9						
2.72								50	3.50	200.00			37.50	1		1	1			2								7							
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

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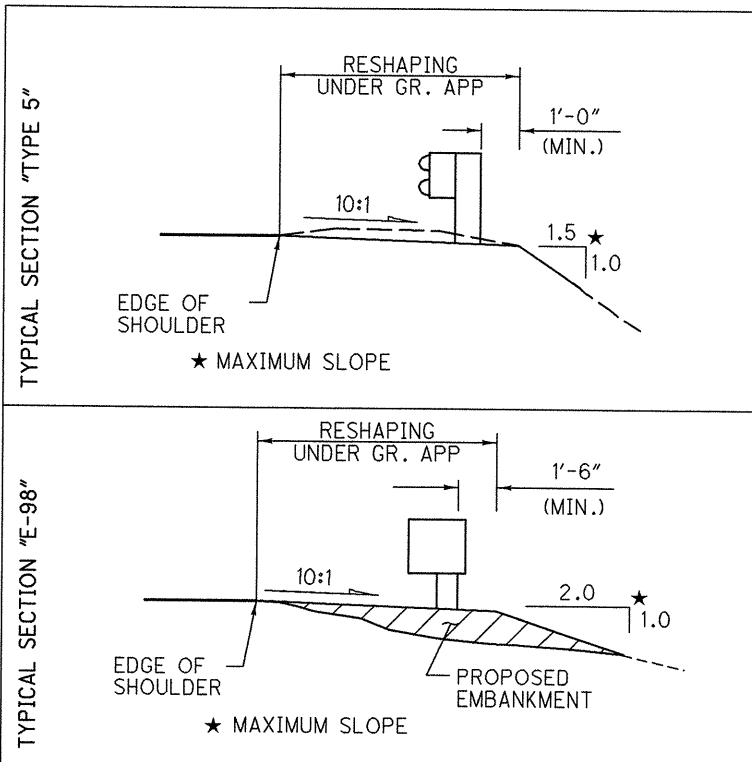


SR 601

* - 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 BY: MER
 CHECKED BY: BAD

GUARDRAIL LOCATION - HURON
SLM 17.74

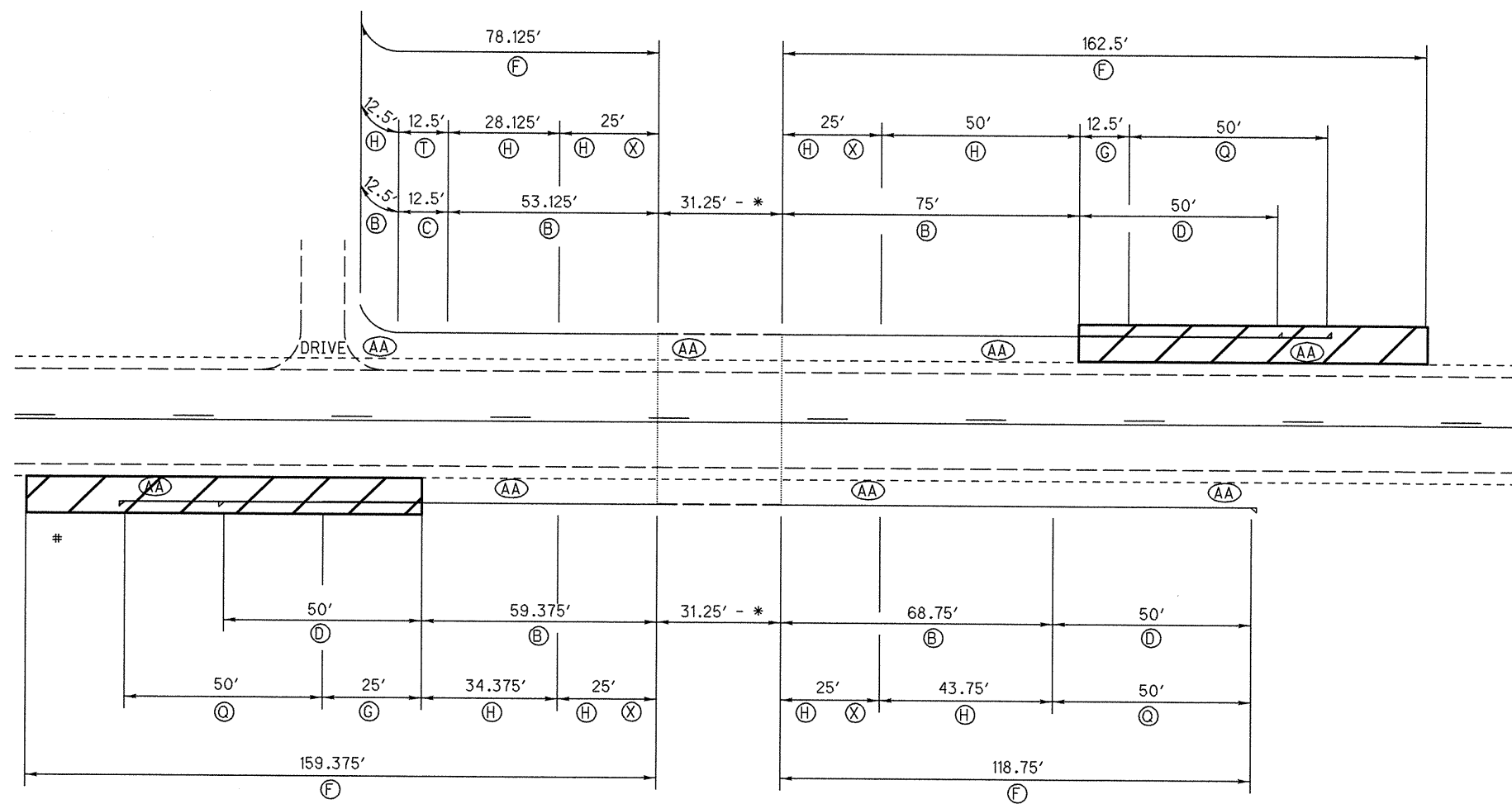
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LOR-20-0.00



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**GUARDRAIL LOCATION - HURON
SLM 22.27**

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

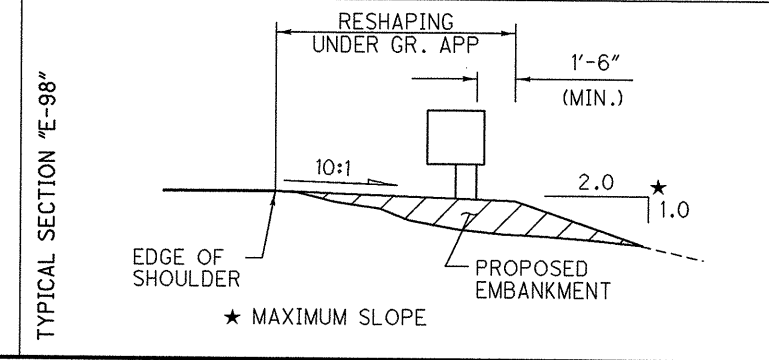
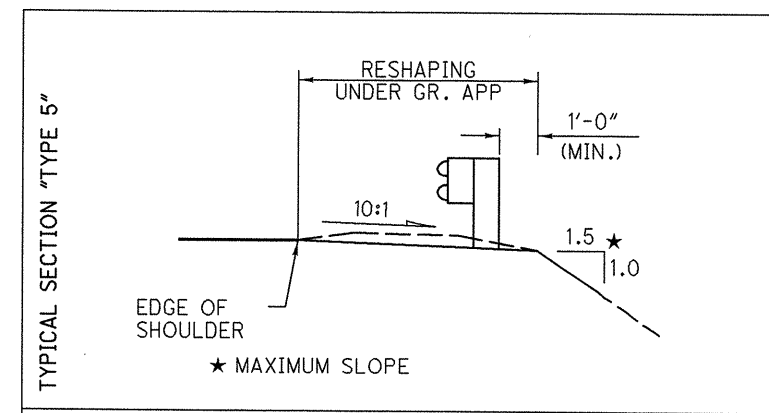


AN ESTIMATED QUANTITY 25 CY OF EXCAVATION, AS PER PLAN HAS BEEN CARRIED TO THE ROADWAY SUB-SUMMARY FOR USE IN RELOCATING THE EXISTING DITCH TO ACCOMMODATE THE ANCHOR ASSEMBLY, E-98 INSTALLATION.

* - GUARDRAIL WITH TUBULAR BACKUP

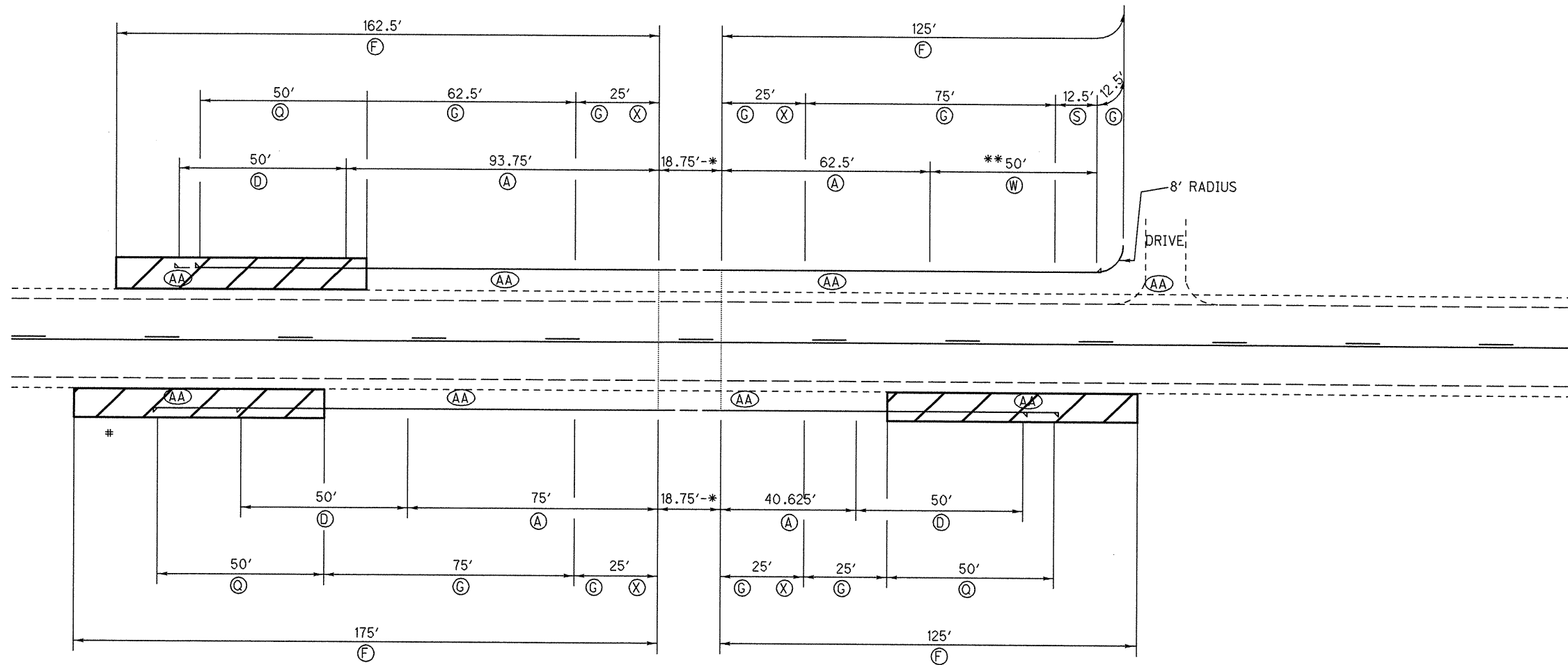
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
ⓑ	202	GUARDRAIL REMOVED FOR REUSE	FT	140.625	128.125	268.75
ⓒ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE	EACH	1		1
ⓓ	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE E-98	EACH	1	2	3
▨	203	EMBANKMENT, AS PER PLAN	CU YD	25	25	50
Ⓕ	209	RESHAPING UNDER 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

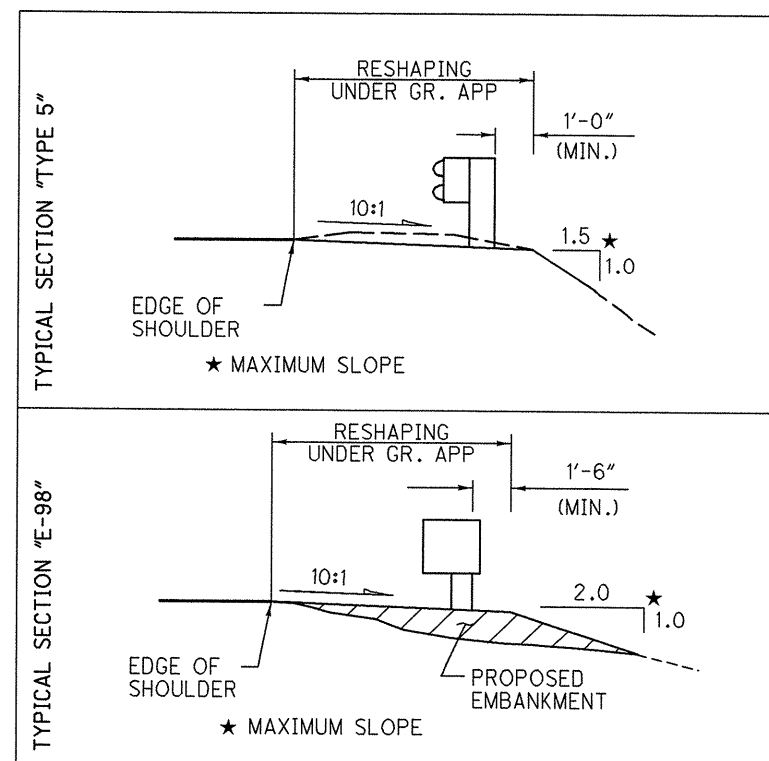


AN ESTIMATED QUANTITY 15 CY OF EXCAVATION, AS PER PLAN HAS BEEN CARRIED TO THE ROADWAY SUB-SUMMARY FOR USE IN RELOCATING THE EXISTING DITCH TO ACCOMMODATE THE ANCHOR ASSEMBLY, E-98 INSTALLATION.

* - 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 .



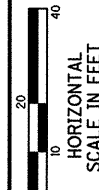
GUARDRAIL LOCATION - HURON
SLM 22.84

HUR-20-16.35
LOR-20-0.00

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107

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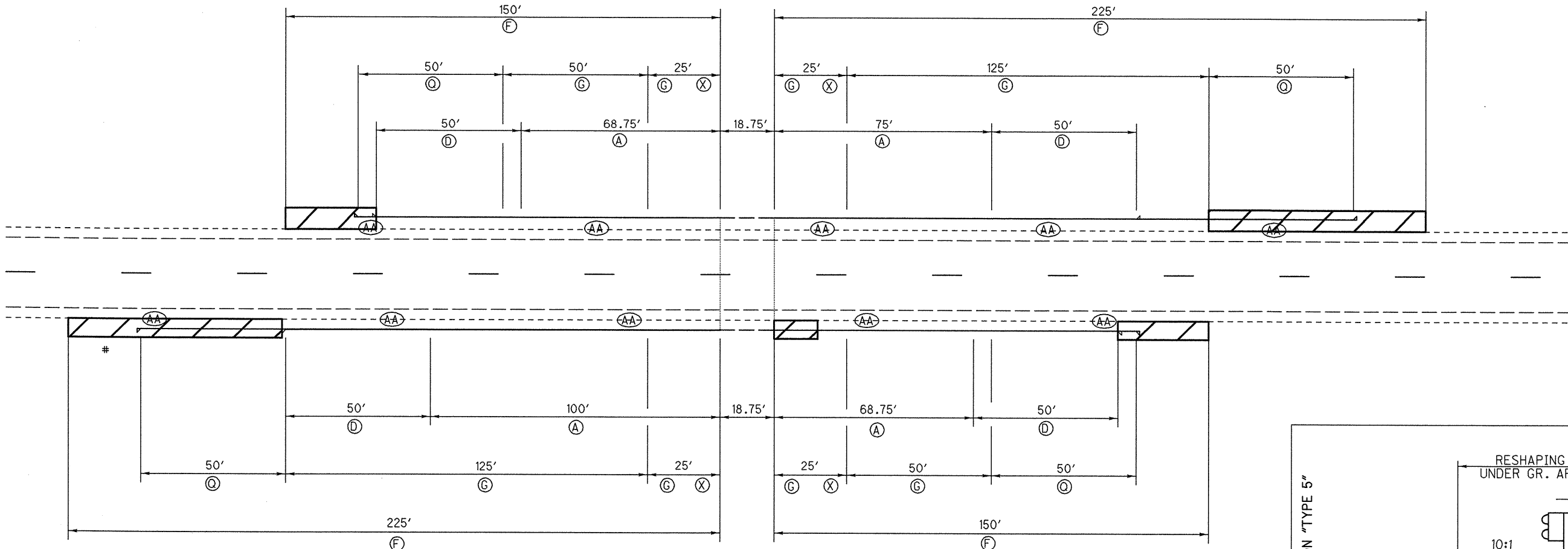
0 20 40
HORIZONTAL
SCALE IN FEET



CALCULATED
MER
CHECKED
BAD

**GUARDRAIL LOCATION - HURON
SLM 24.50**

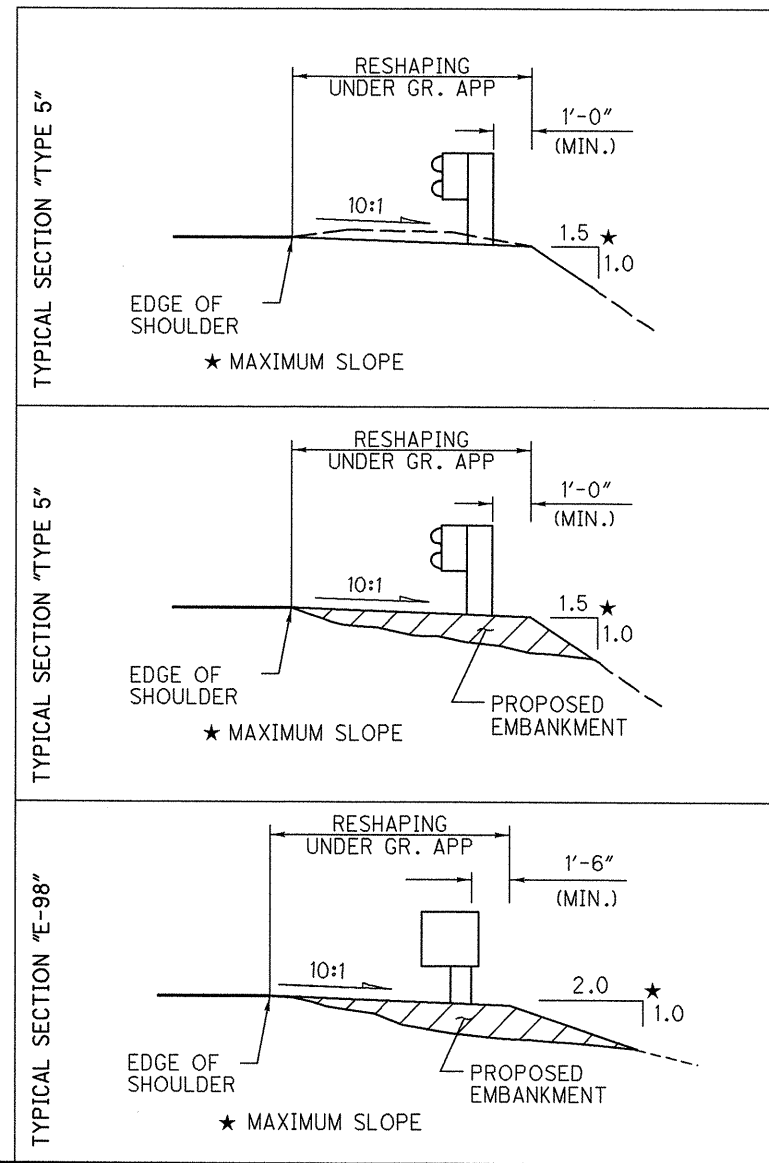
**HUR-20-16.35
LOR-20-0.00**



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.

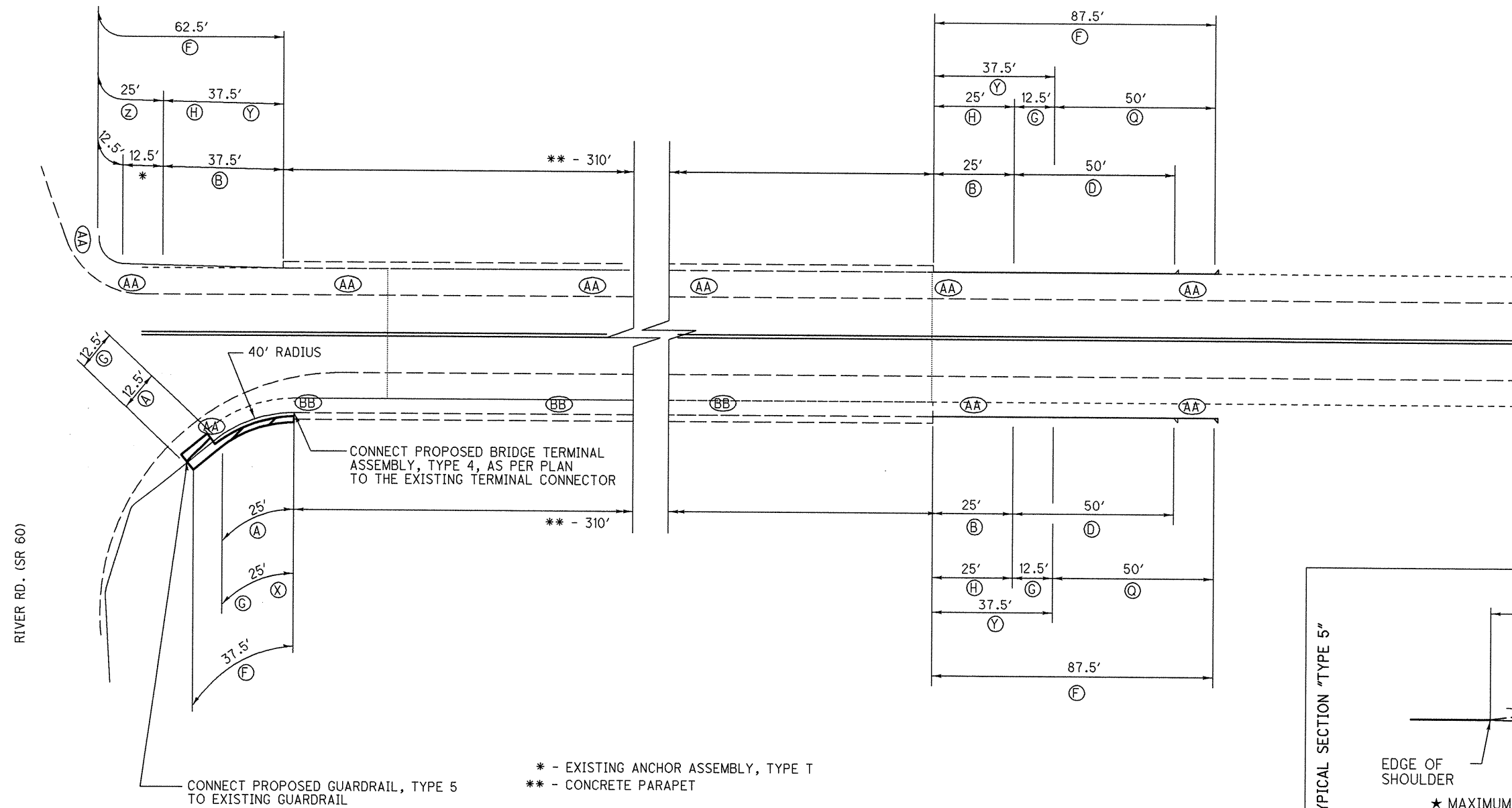
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		
				LEFT	RIGHT	TOTAL
(A)	202	GUARDRAIL REMOVED	FT	143.75	168.75	312.5
(D)	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE E-98	EACH	2	2	4
(Hatched)	203	EMBANKMENT, AS PER PLAN	CU YD	30	35	65
(F)	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	3.75	3.75	7.50
(G)	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

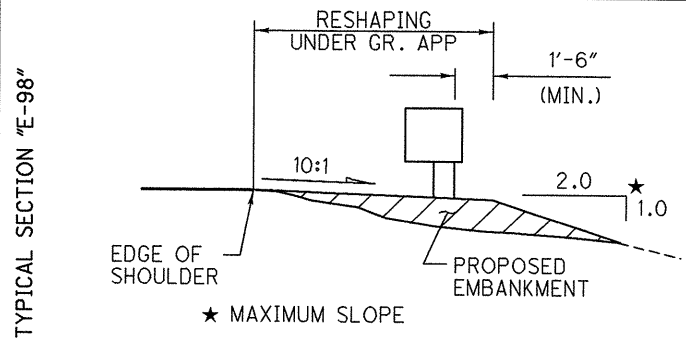
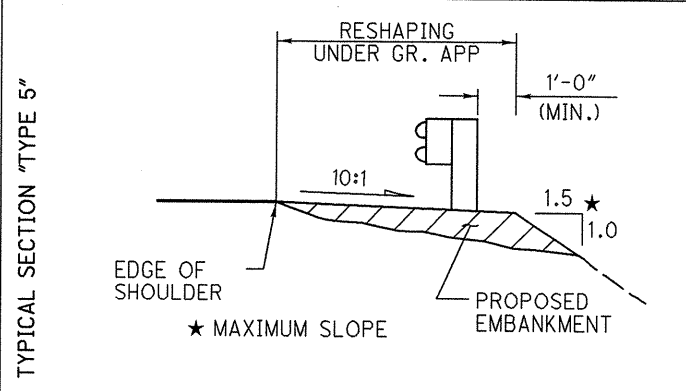
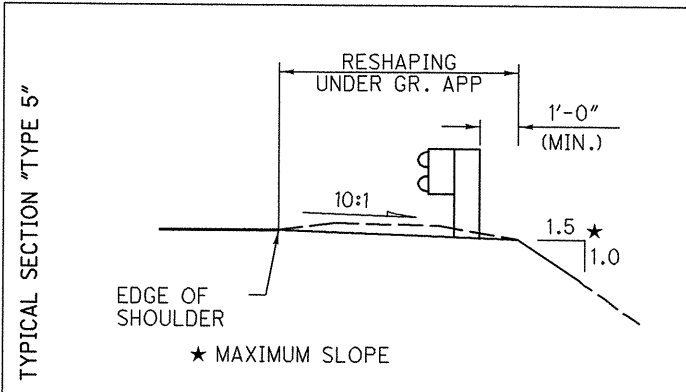
DESIGN FILE: I:\projects\7284\7284GR001.dgn
 WORKSTATION: mrobins DATE: 10/9/2007

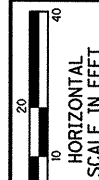


* - EXISTING ANCHOR ASSEMBLY, TYPE T
 ** - CONCRETE PARAPET

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 .

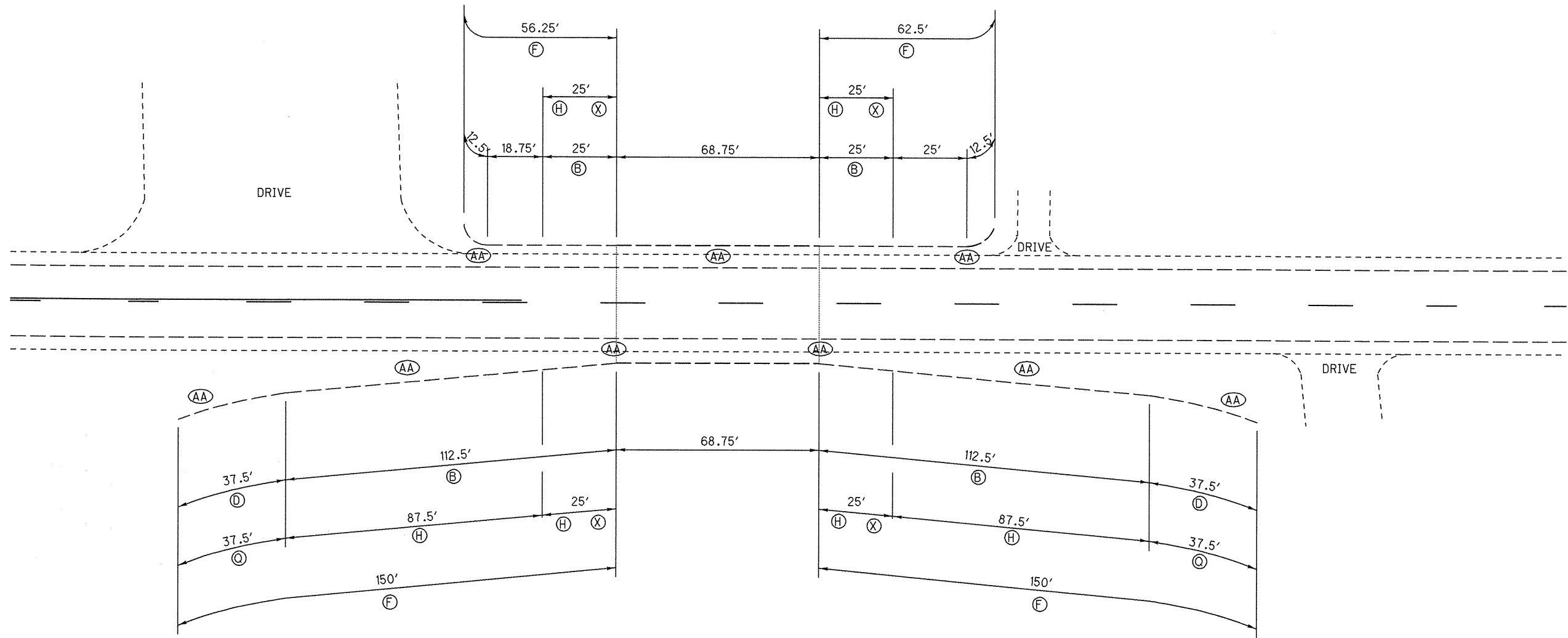




CALCULATED
MER
CHECKED
BAD

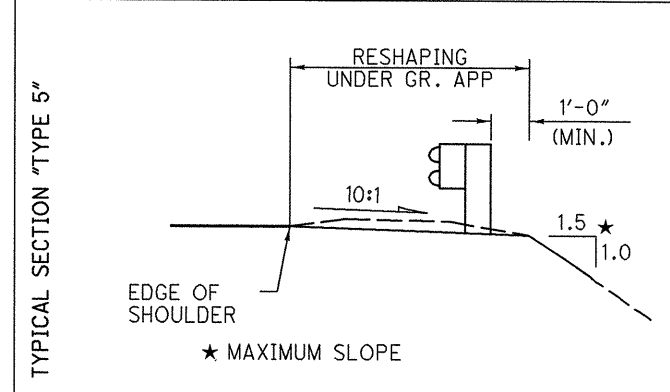
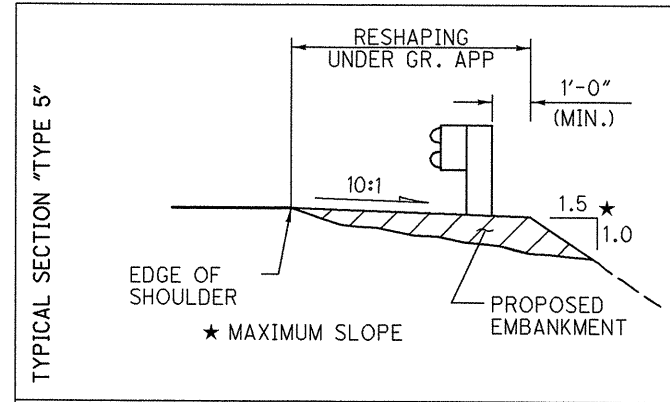
GUARDRAIL LOCATION - LORAIN
SLM 2.21

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



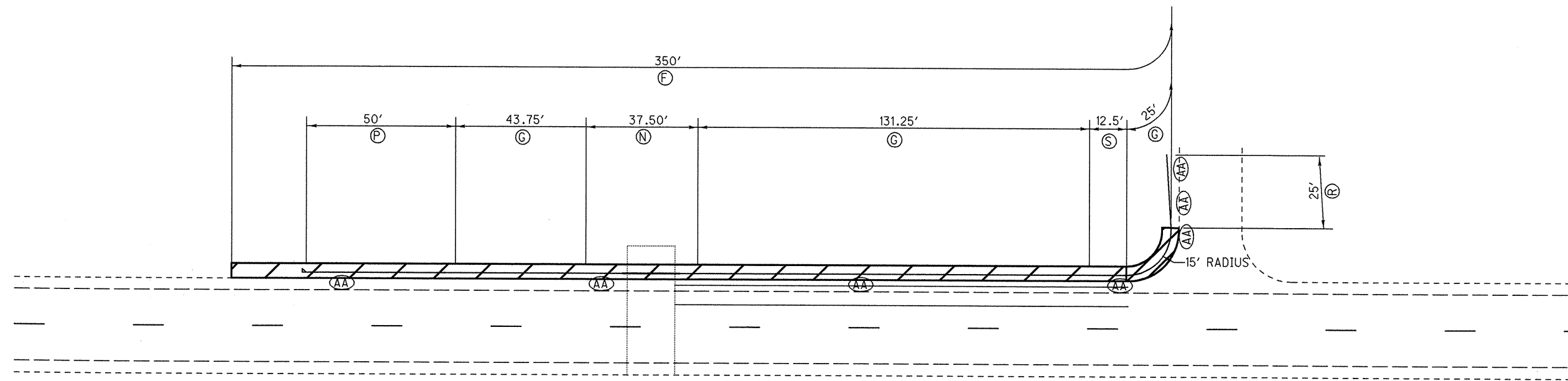
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
BB	202	GUARDRAIL REMOVED FOR REUSE	FT	50	225	275
DD	202	ANCHOR ASSEMBLY REMOVED, FOR REUSE, TYPE B-98	EACH		2	2
	202	GUARDRAIL POST REMOVED	EACH	4		4
FF	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	1.19	3.00	4.19
HH	606	GUARDRAIL REBUILT, TYPE 5	FT	50	225	275
CC	606	ANCHOR ASSEMBLY REBUILT, TYPE B-98	EACH		2	2
XX	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
	606	GUARDRAIL POST	EACH	4		4
AA	626	BARRIER REFLECTOR, TYPE A	EACH	3	6	9

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



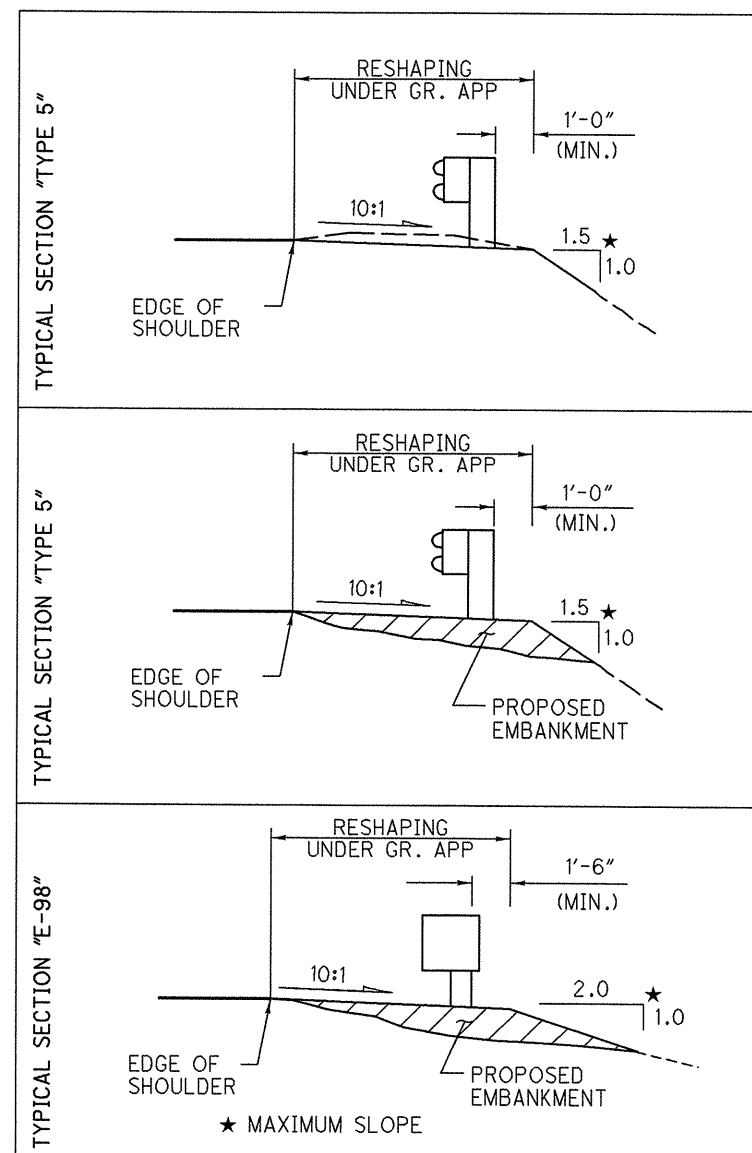
DESIGN FILE: I:\projects\77284\77284GR001.dgn
WORKSTATION: mrobins1
DATE: 10/9/2007

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
F	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	3.50		3.50
C	606	GUARDRAIL, TYPE 5	FT	200		200
N	606	GUARDRAIL, TYPE 5, LONG SPAN	FT	37.50		37.50
P	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
S	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
R	606	ANCHOR ASSEMBLY, TYPE A	EACH	1		1
AA	626	BARRIER REFLECTOR, TYPE A	EACH	7		7

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



CALCULATED BY: MER
 CHECKED BY: BAD
GUARDRAIL LOCATION LORAIN SLM 2.72
HUR-20-16.35
LOR-20-0.00
 26
 107

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	QUANTITY		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	QUANTITY		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	QUANTITY		TOTAL
				LEFT	RIGHT	
DEPOT ST.	202	CURB AND GUTTER REMOVED	FT		38	38
					TOTAL	38

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		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	QUANTITY		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

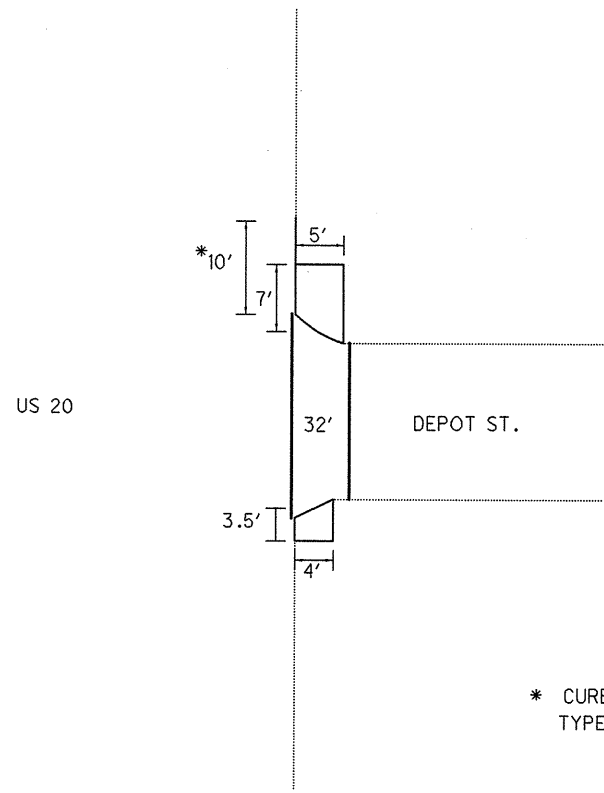
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
DEPOT ST.	609	CURB, TYPE 6	FT		10	10
VERLIN ST.	609	CURB, TYPE 6	FT		5.5	5.5
COOPER ST.	609	CURB, TYPE 6	FT		23	23
RIVER RD. (SR60)	609	CURB, TYPE 6	FT		52	52
					TOTAL	90.5

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

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 10.

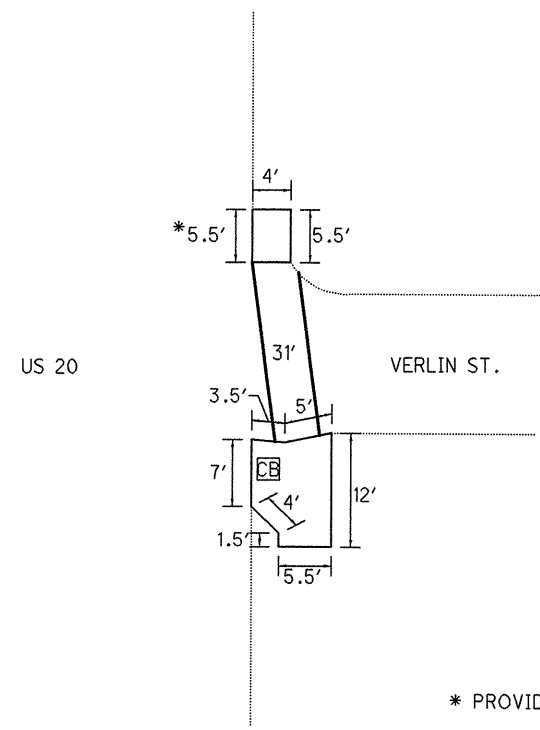
DESIGN FILE: I:\projects\77284\77284GM001.dgn
WORKSTATION: mrobins1 DATE: 10/9/2007

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



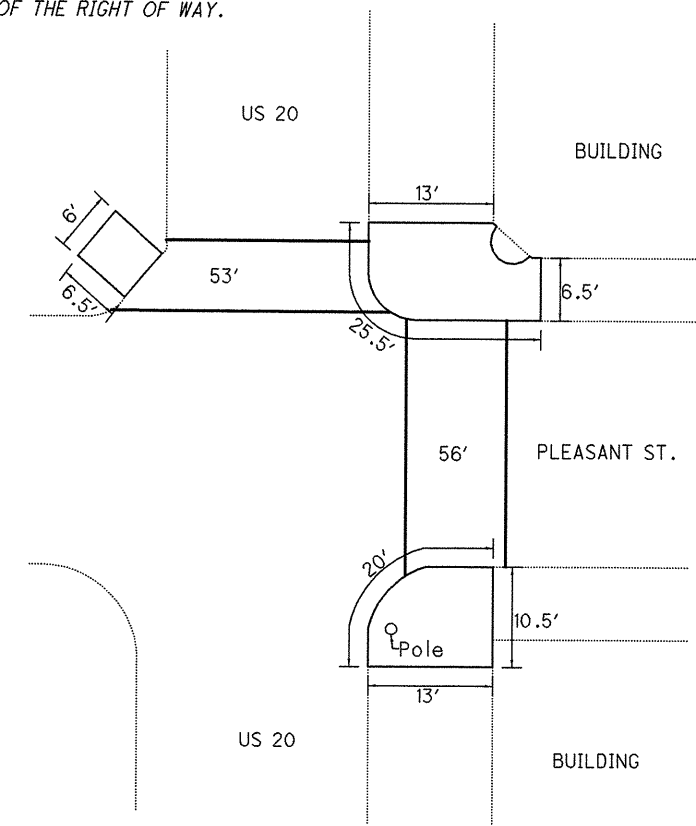
* CURB REMOVED AND CURB,
TYPE 6 PROVIDED

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

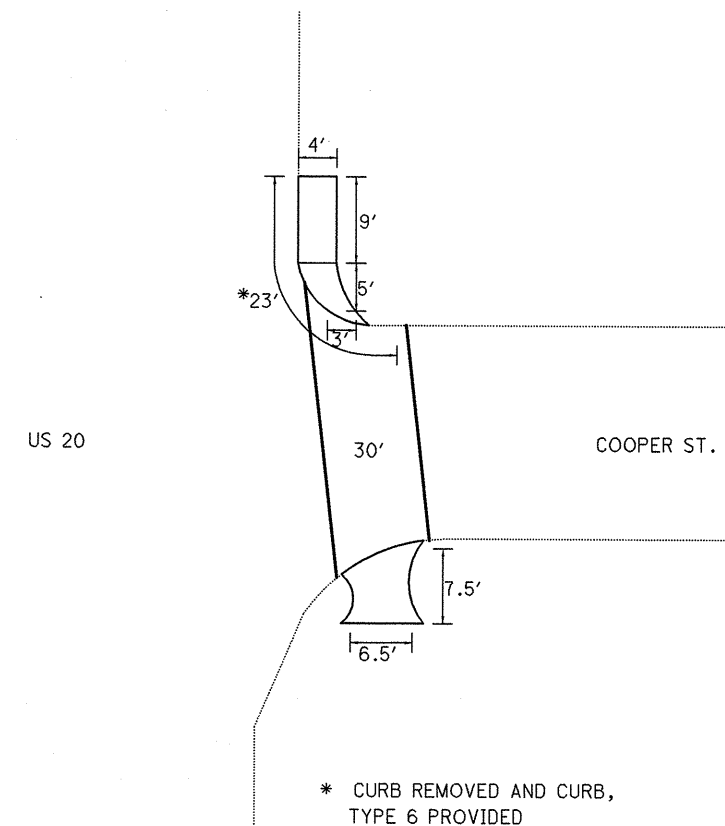


* PROVIDE CURB, TYPE 6

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

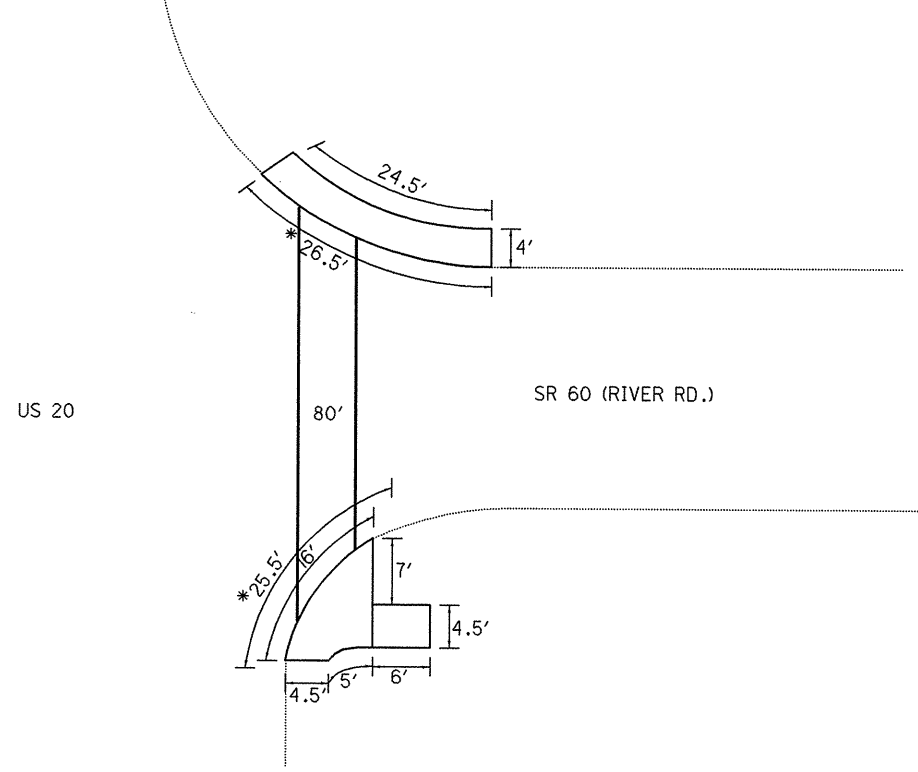


NOTE:
NO WORK SHALL BE
PERFORMED OUTSIDE
OF THE RIGHT OF WAY.



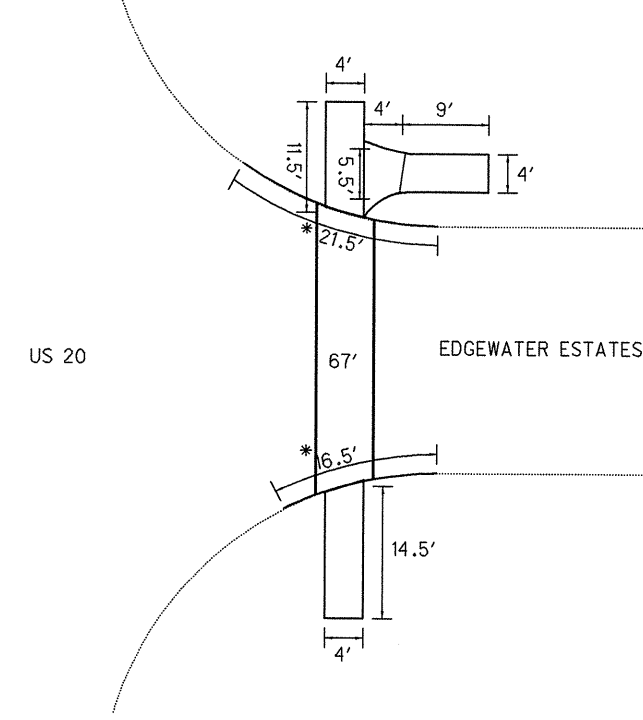
* CURB REMOVED AND CURB,
TYPE 6 PROVIDED

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

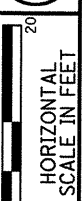


* CURB REMOVED AND CURB,
TYPE 6 PROVIDED

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



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



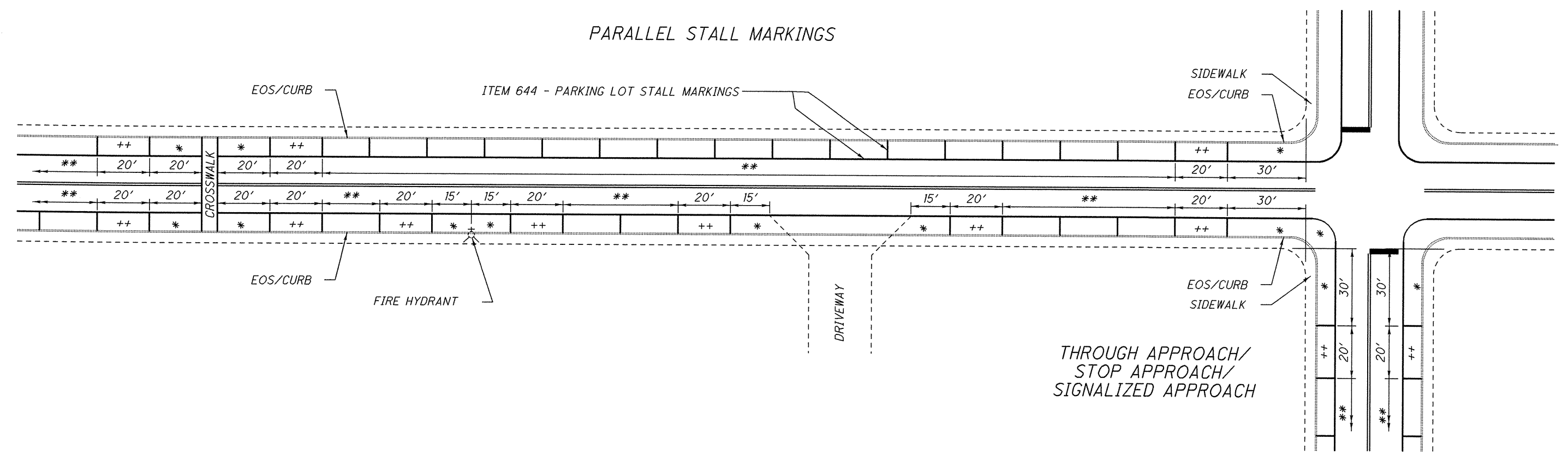
CALCULATED
MER
CHECKED
BAD

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



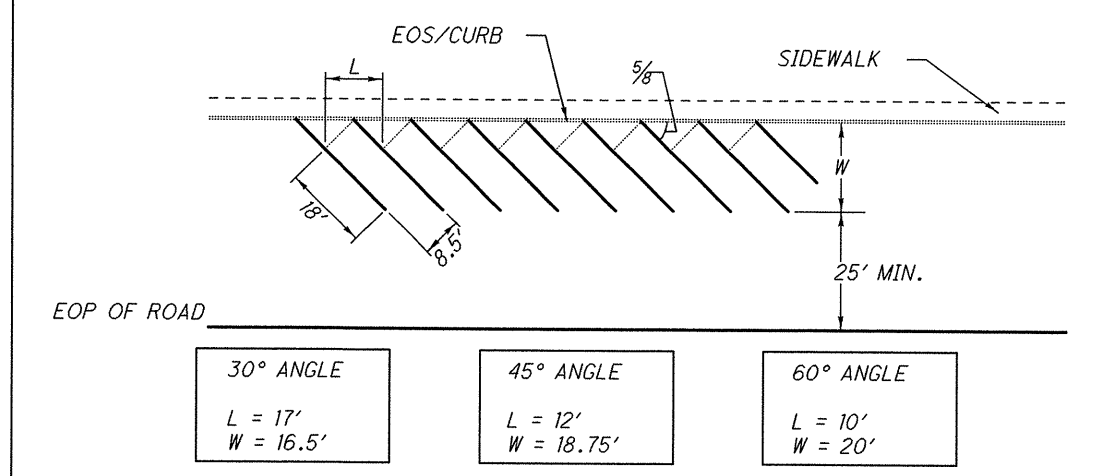
NOTES

- 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.

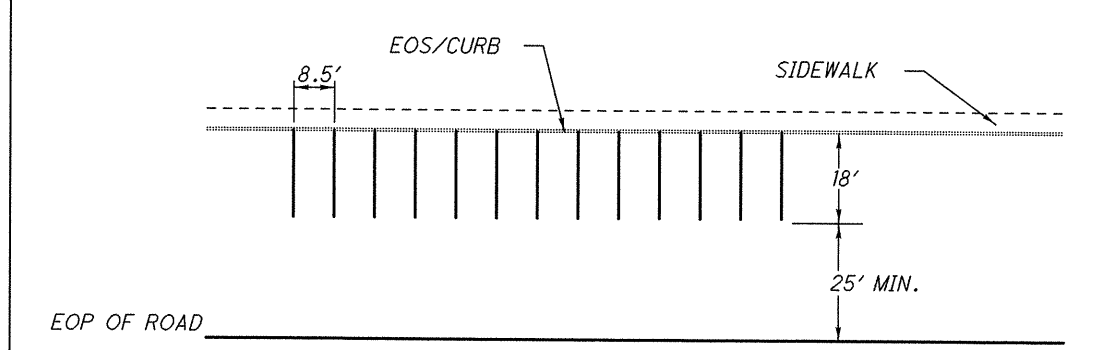
PAYMENT FOR THE LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM THE WORK WHICH INCLUDES LAYING OUT THE PARKING SPACES AS WELL AS THE NO PARKING ZONES SHALL BE INCLUDED IN THE COST OF ITEM 642 - PARKING LOT STALL MARKING, TYPE 2. THE DEPARTMENT WILL NOT PAY FOR COST ASSOCIATED WITH CORRECTING IMPROPERLY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

QUANTITIES CARRIED TO PAVEMENT MARKING SHEET 31

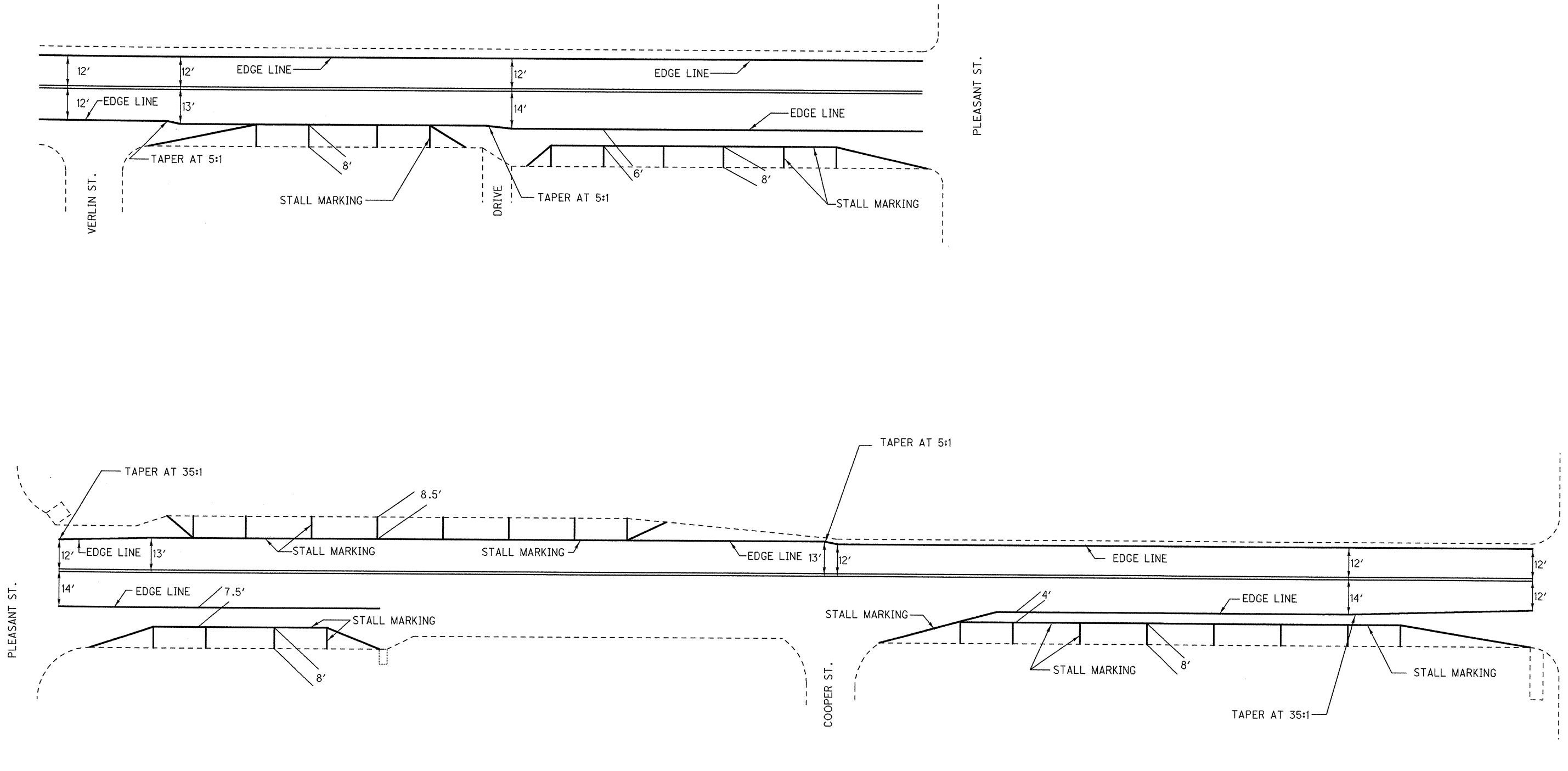
ANGLE STALL MARKINGS



PERPENDICULAR STALL MARKINGS



DESIGN FILE: I:\projects\77284\77284A001.dgn
 WORKSTATION: mrobins1 DATE: 10/9/2007



CALCULATED
MER
CHECKED
BAD

STANDARD PARKING LOT STALL & PAVEMENT MARKINGS

HUR-20-16.35
HUR-20-16.35

AUXILIARY & LONG LINE MARKINGS

CALC BY
MER
CHKD BY
BAD

PARTICIPATION	ROUTE	COUNTY	STATION / SLM		HIGHWAY MILES	614				642, TYPE 1			644															SPECIAL										
			FROM	TO		MILE	MILE	MILE	MILE	MILE	MILE	AUXILIARY MARKINGS (740.04)																										
			MILE	MILE		MILE	MILE	MILE	MILE	EDGE LINE		CENTER LINE			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					
										TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)	LANE LINE	SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)								72 INCH	96 INCH		LEFT	RIGHT	THROUGH		COMBINATION	72 INCH				96 INCH				
FED/ST	US 20	HURON	16.35	16.49	0.14		0.42			0.28			0.14																									
FED/ST	US 20	HURON	16.49	16.54	0.05		0.08			0.05			0.03		30																							
CITY	US 20	HURON	16.49	16.54	0.05		0.08			0.05			0.03		24																							
FED/ST	US 20	HURON	16.54	16.75	0.21		0.63			0.42			0.21																									
FED/ST	US 20	HURON	16.75	16.84	0.09		0.14			0.09			0.04																									
CITY	US 20	HURON	16.75	16.84	0.09		0.14			0.09			0.04																									
FED/ST	US 20	HURON	16.84	28.69	11.85		35.55		761	23.70			11.85	185	1,045	698							2	1,111														
FED/ST	US 20	LORAIN	0.00	6.02	6.02		18.06		231	12.04			6.02		423																							
ADDITIONAL LENGTH FOR SIDE ROADS													HURON	0.14																								
													LORAIN	0.05																								
CITY TOTALS								0.22					0.07		24																							
FED/STATE TOTALS								54.88					18.48	185	1,498																							
TOTAL					18.50			55.10		992	36.72			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	
		FROM	TO		RAISED PAVEMENT MARKER REMOVED	RPM	ONE-WAY	TWO-WAY					EACH	DESCRIPTION	
								WHITE	YELLOW / YELLOW	WHITE / RED	YELLOW / RED				BLUE / BLUE
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.	
														NOTES	
														1) SEE PAVEMENT MARKING CENTER LINE LOG SUPPLIED AT THE PRECONSTRUCTION MEETING.	
														2) THE LANES SHALL BE STRIPED AT 12' WIDTHS, EXCEPT AS SHOWN ON SHEET 30.	
														3) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: SR 601 SR 303 SR 60 PLEASANT ST & US 20 SR 511	
														4) ALL SIDE ROADS AND INTERSECTIONS SHALL BE STRIPED WITH A 20' DOUBLE SOLID YELLOW CENTER LINE.	
TOTAL					1,143	1,197		1,181	5		11				

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

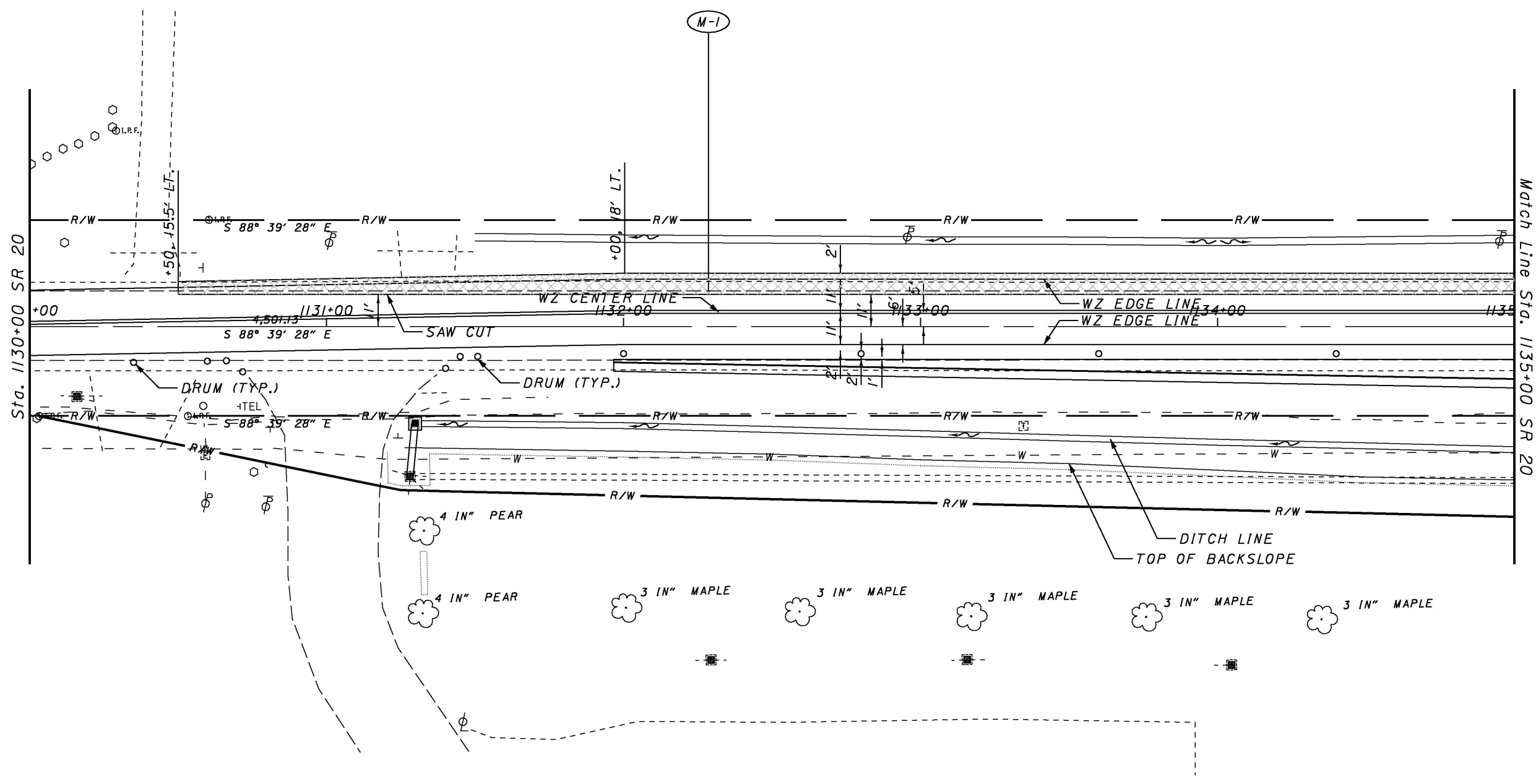
REF NO.	SHEET NO.	STATION TO STATION		204	204		203	252	254	301	301	304	407	442	442	442	604	617		SPECIAL				
				SUBGRADE COMPACTION	PROOF ROLLING		FULL DEPTH PAVEMENT SAWING	PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE)	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (6.00')	ASPHALT CONCRETE BASE, PG64-22, 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

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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

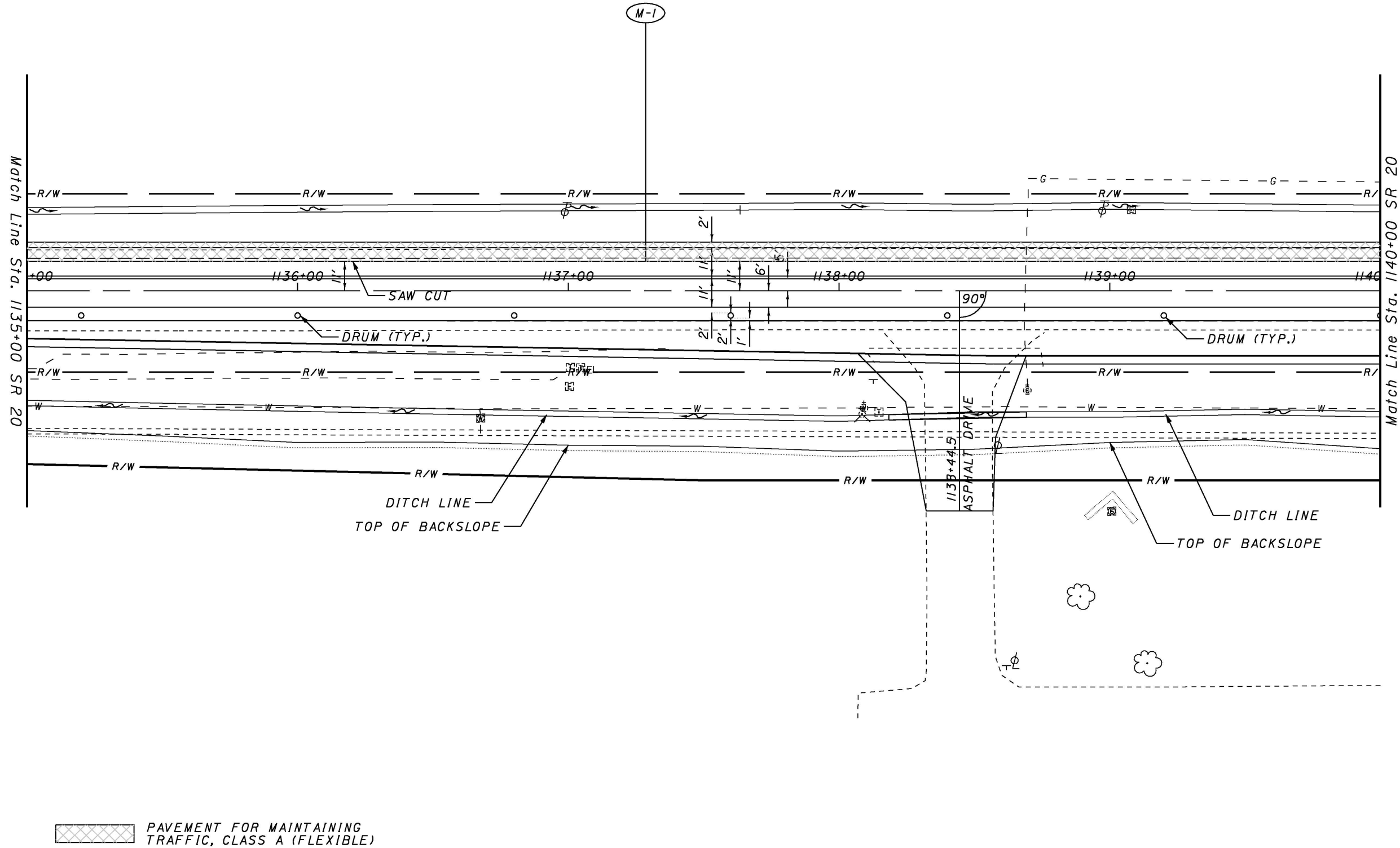



MAINTENANCE OF TRAFFIC
STA. 1130+00 - STA. 1135+00

HUR-20-16.35
LOR-20-0.00

32A
 107

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DATE: 11/15/2007



 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (FLEXIBLE)

CALCULATED
SJD
CHECKED
MJS

0 10 20 40
HORIZONTAL SCALE IN FEET



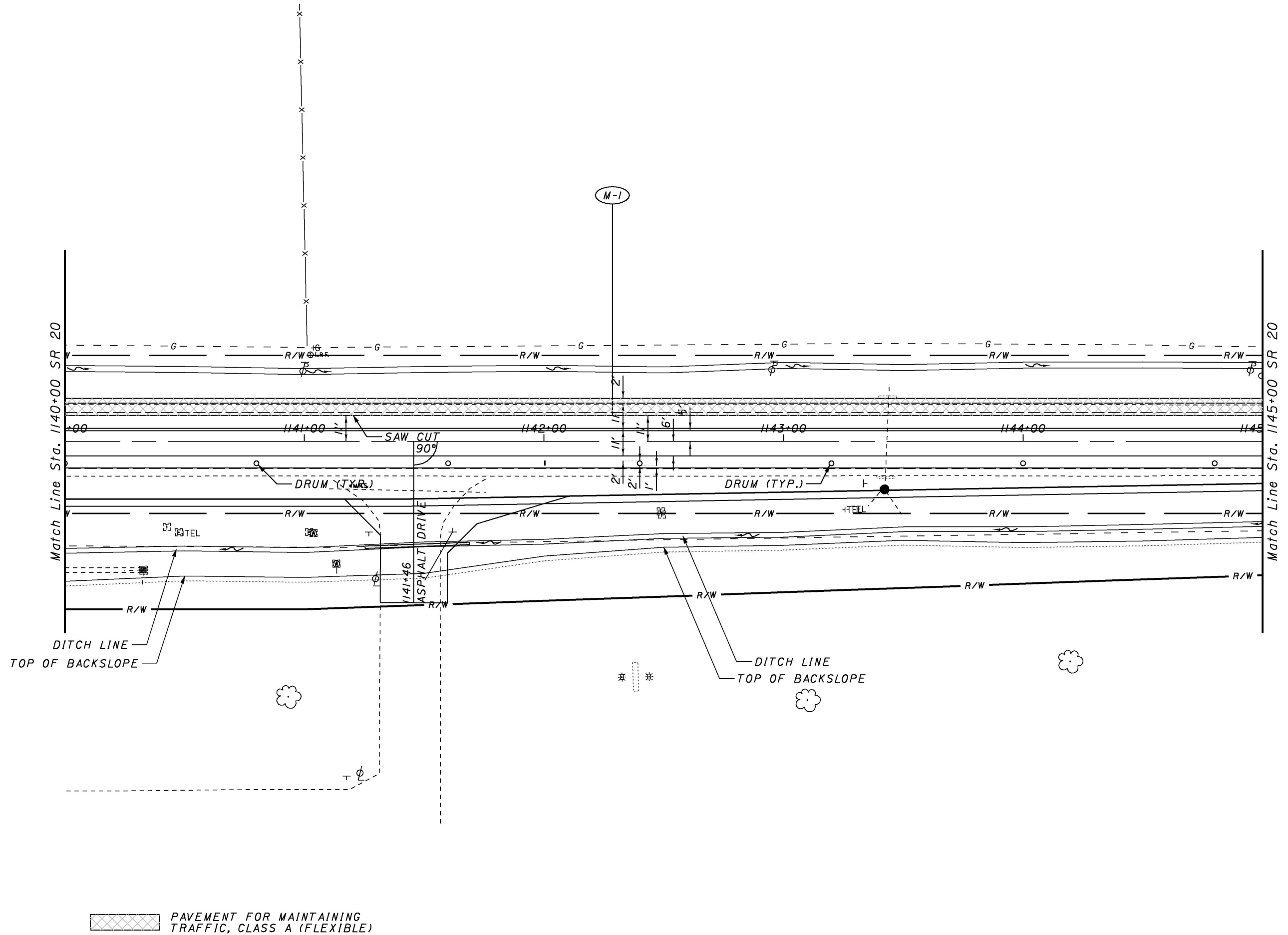
MAINTENANCE OF TRAFFIC
STA. 1135+00 - STA. 1140+00

HUR-20-16.35
LOR-20-0.00

32B
107

REVISED: 11/15/07

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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. 1140+00 - STA. 1145+00**

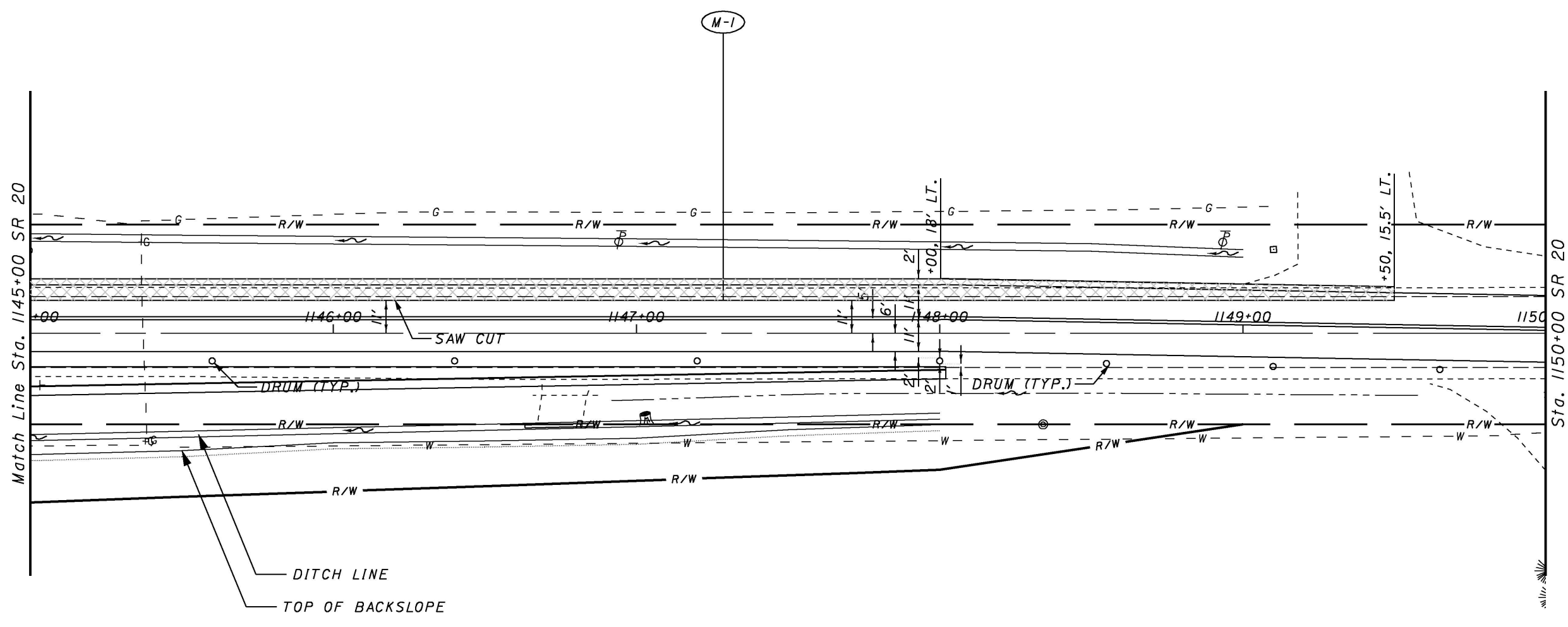
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LOR-20-0.00**

32C
107

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 DATE: 11/15/07

CALCULATED
SJD
CHECKED
MJS

0 10 20 40
HORIZONTAL
SCALE IN FEET



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

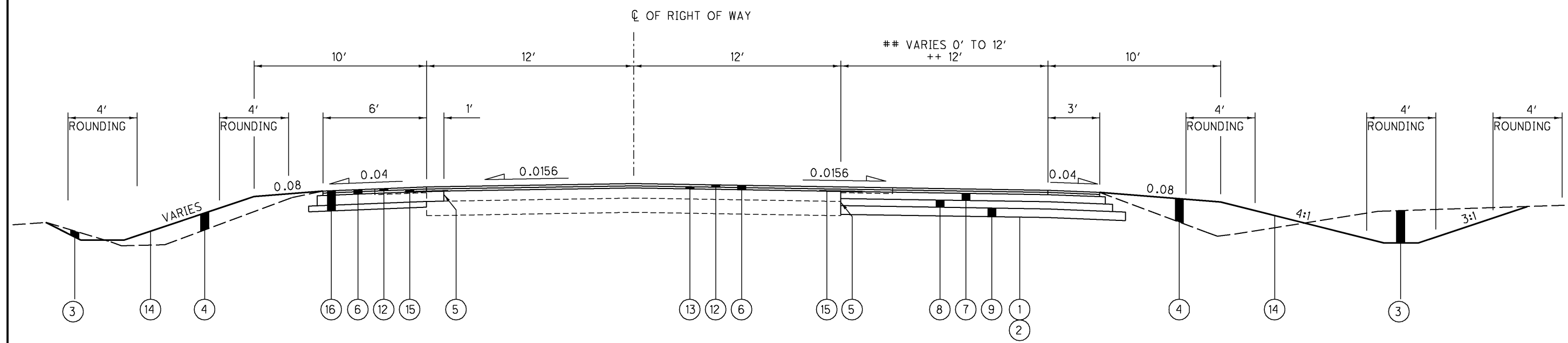
**HUR-20-16.35
 LOR-20-0.00**

32D
107

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)

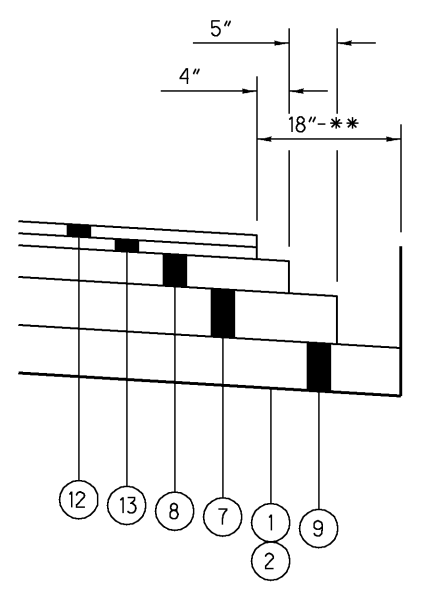
REVISED: 11/15/07



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.



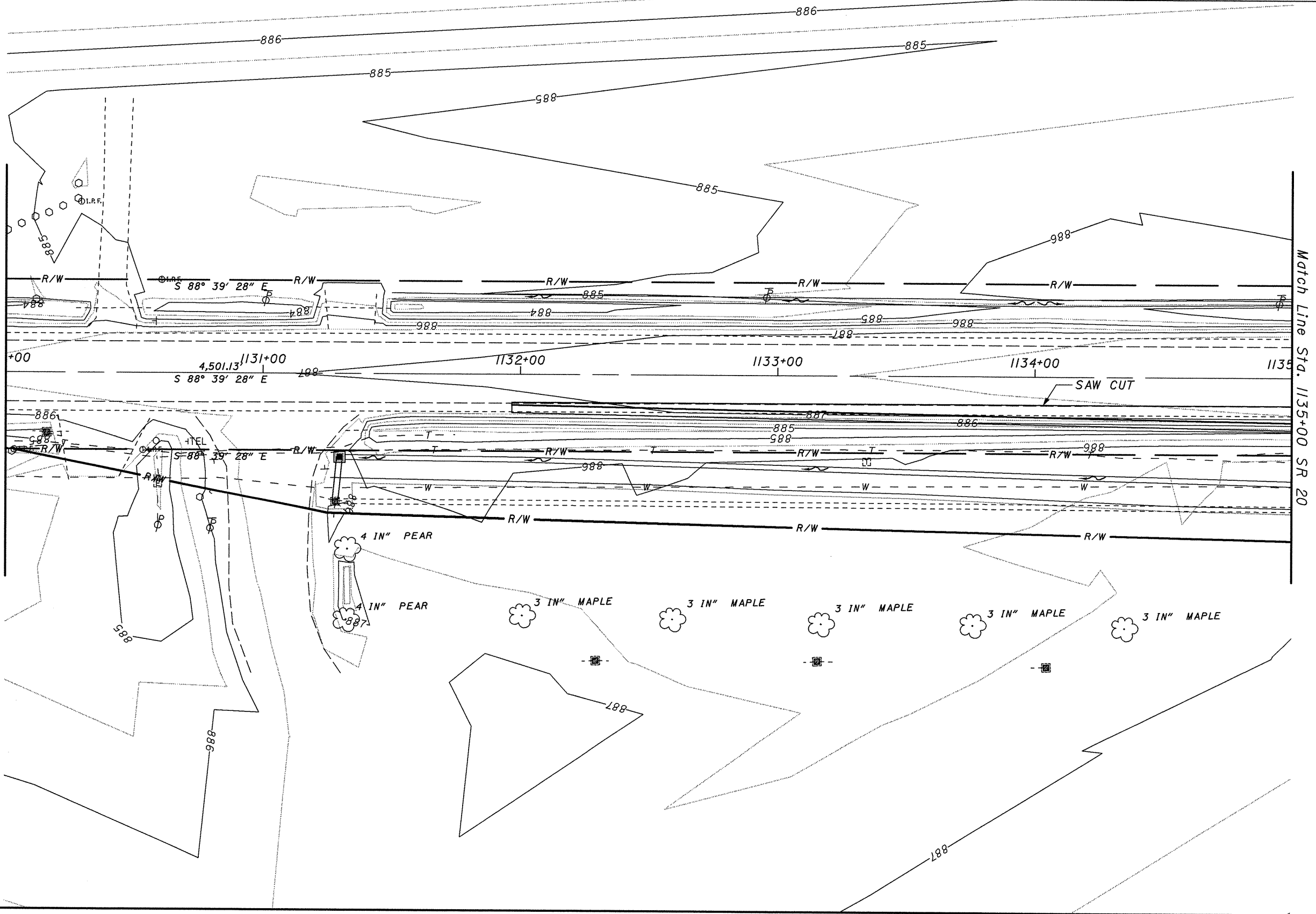
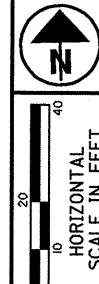
LEGEND

- | | |
|--|--|
| (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

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 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



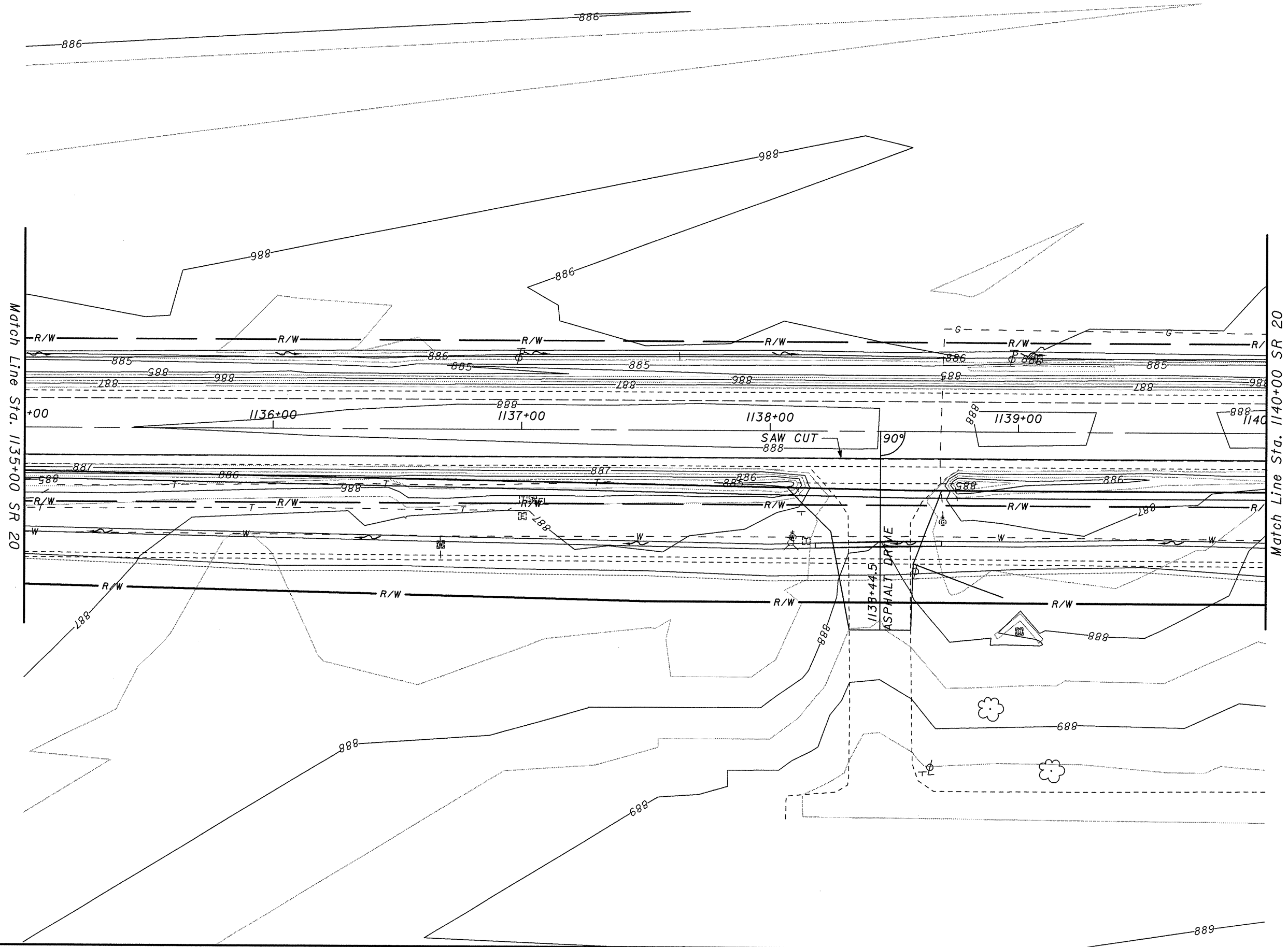
CALCULATED	SJD	CHECKED	BAD
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SITE PLAN
STA. 1130+00 - STA. 1135+00

HUR-20-16.35
LOR-20-0.00

33A
 107

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CHECKED	BAD

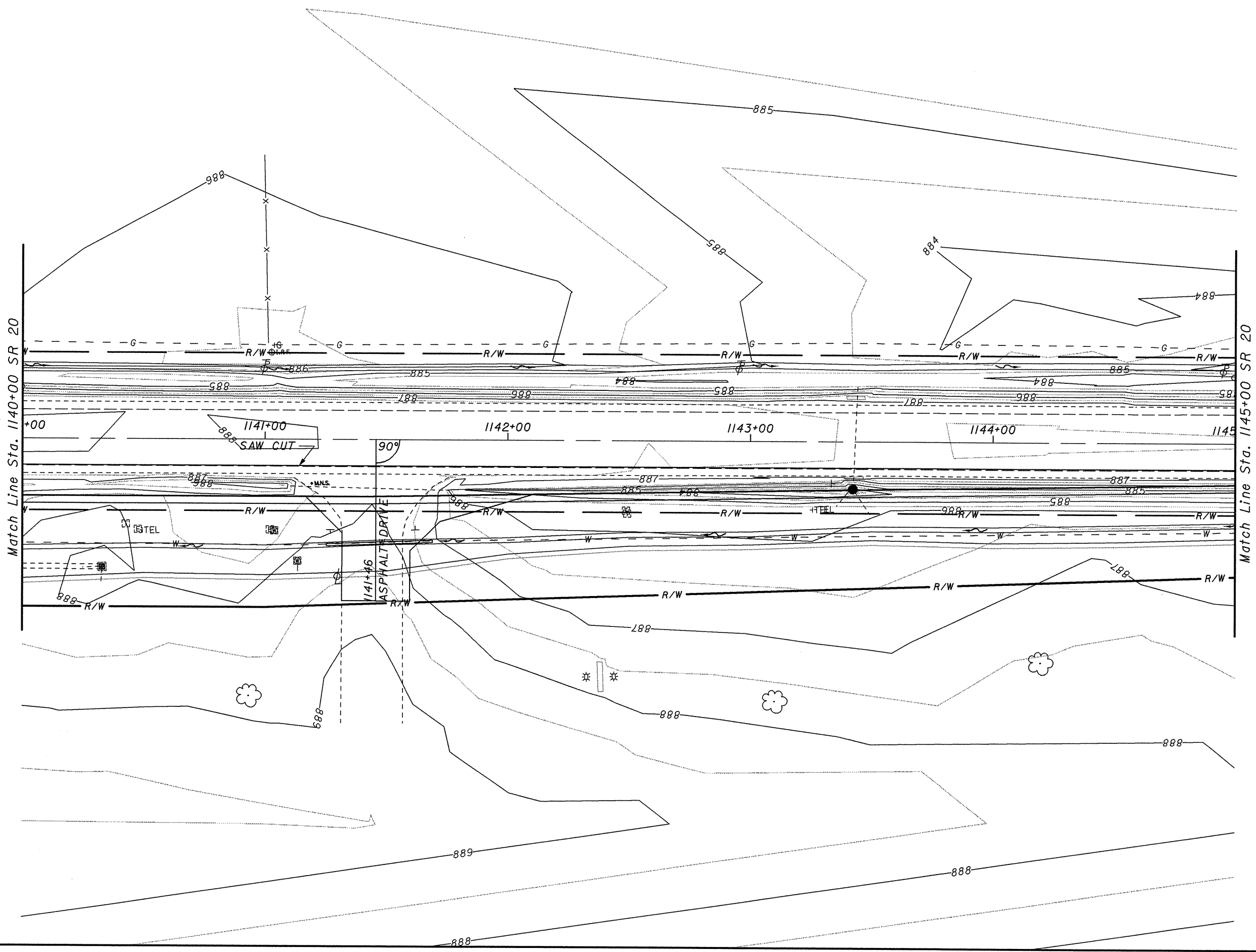
HORIZONTAL SCALE IN FEET
0 10 20 40

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

HUR-20-16.35
LOR-20-0.00

33B
107

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DATE: 10/10/2007
DWG: 10/10/2007



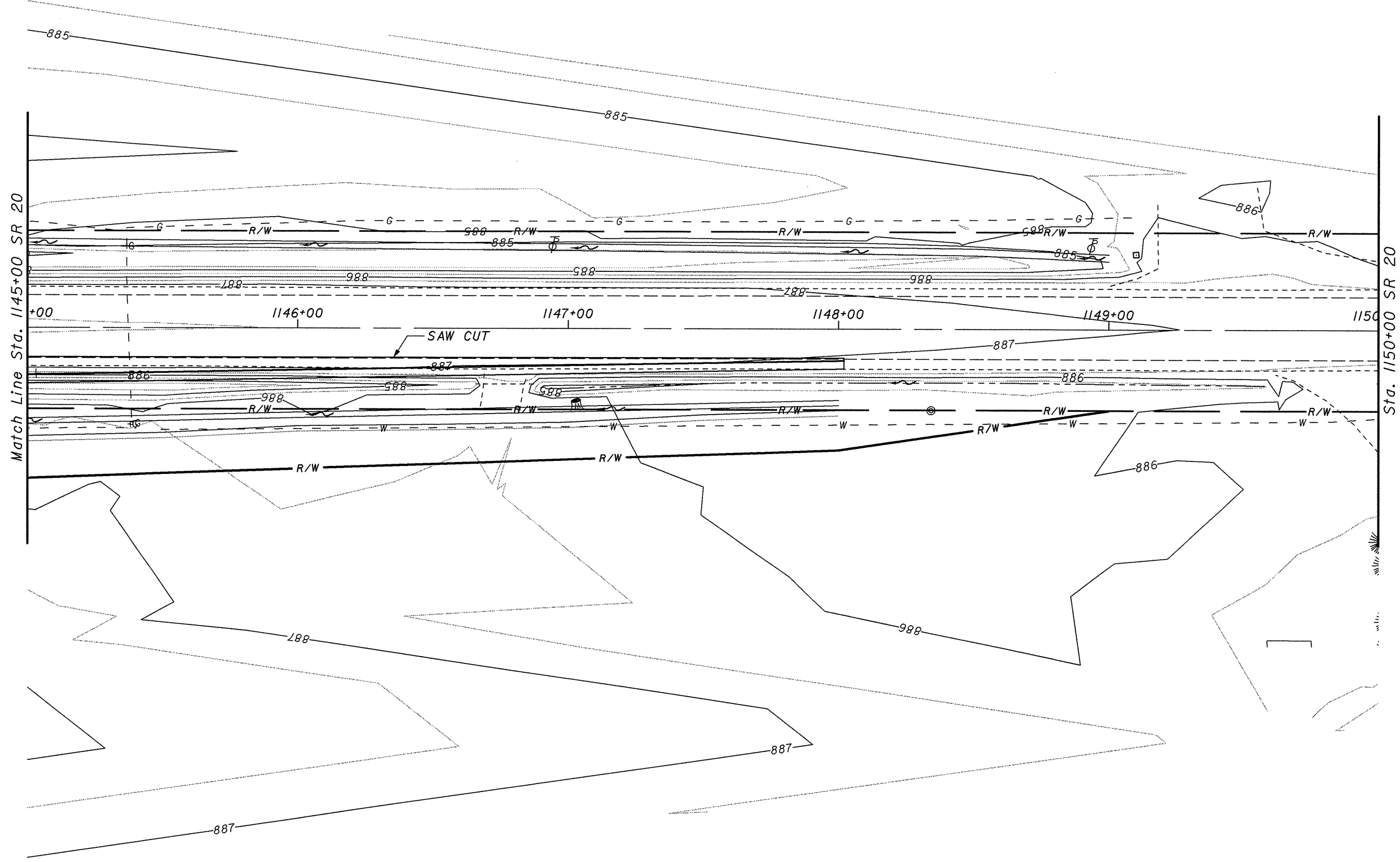
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CHECKED	BAD

0 10 20 30
HORIZONTAL SCALE IN FEET

SITE PLAN
STA. 1140+00 - STA. 1145+00

HUR-20-16.35
LOR-20-0.00

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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

