

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	McHENRY	56	1

#4 = 60  
Total Sheets

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

FAP ROUTE 335  
ILLINOIS ROUTE 176 AT BRIARWOOD ROAD / OHNSTAD ROAD  
SECTION 11-00114-00-CH  
PROJECT NO. M-9003(715)  
INTERSECTION IMPROVEMENT  
McHENRY COUNTY  
JOB NO. C-91-114-11



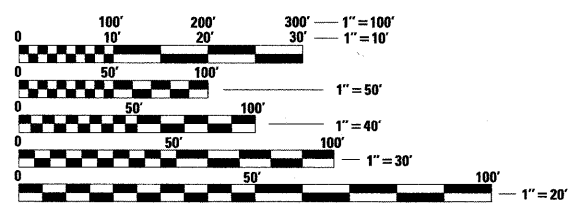
LOCATION OF SECTION INDICATED THUS: - [Symbol] -

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FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

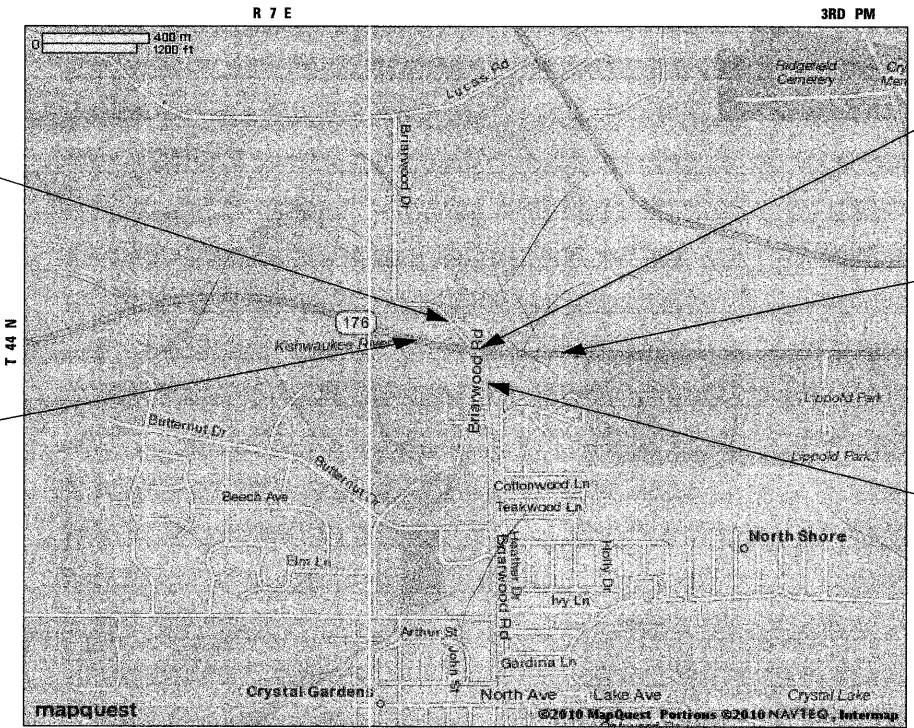
J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

CONTRACT NO. 63551

**OHNSTAD ROAD**  
ADT = 5,500  
POSTED SPEED = 35 MPH  
DESIGN SPEED = 40 MPH  
FUNCTIONAL CLASSIFICATION = COLLECTOR URBAN

**BRIARWOOD ROAD**  
ADT = 5,500  
POSTED SPEED = 30 MPH  
DESIGN SPEED = 35 MPH  
FUNCTIONAL CLASSIFICATION = COLLECTOR URBAN

**ILLINOIS ROUTE 176**  
ADT = 13,700  
POSTED SPEED LIMIT = 45 MPH  
DESIGN SPEED = 50 MPH  
FUNCTIONAL CLASSIFICATION = OTHER PRINCIPAL ARTERIAL



LOCATION MAP  
APPROXIMATE SCALE: 1" = 1200'

GROSS AND NET LENGTH OF PROJECT: IL 176  
BRIARWOOD/OHNSTAD  
TOTAL  
1951 ft (0.37 MILE)  
1264 ft (0.24 MILE)  
3215 ft (0.61 MILE)

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

STATION EQUATION  
119 + 23.2 IL RTE 176 =  
37 + 71.3 BRIARWOOD / OHNSTAD

IL 176  
PROJECT ENDS  
STA. 129 + 01

BRIARWOOD ROAD  
PROJECT BEGINS  
STA. 31 + 90

OHNSTAD ROAD  
PROJECT ENDS  
STA. 44 + 54

IL 176  
PROJECT BEGINS  
STA. 109 + 50

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

APPROVED July 18 20 11  
Eric D. Moinet  
CITY OF CRYSTAL LAKE

PASSED July 19 20 11  
[Signature]  
DISTRICT 1 ENGINEER OF LOCAL ROADS

RELEASING FOR BID  
BASED ON LIMITED  
REVIEW July 21 20 11  
Diane M. O'Keefe  
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

DATE: 7/8/2011  
BY: [Signature]  
LICENSE EXPIRES: 11/30/2011



**HAMPTON, LENZINI AND RENWICK, INC.**  
CIVIL ENGINEERS • STRUCTURAL ENGINEERS • LAND SURVEYORS  
380 SHEPARD DRIVE  
ELGIN, ILLINOIS 60123  
847.697.6700 www.hlrengineering.com

184.000959  
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 10.0174.330 DATE: 5/4/2011

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. 847-705-4406

GENERAL

ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED JANUARY 1, 2007, (HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS," ADOPTED JANUARY 1, 2011; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

THE CONTRACTOR SHALL COOPERATE WITH THE CITY OF CRYSTAL LAKE IF ANY MUNICIPAL UTILITY IMPROVEMENTS ARE REQUIRED WITHIN THE DURATION OF THE CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT OR PROTECTION IS NECESSARY.

THE LOCATION ON THE PLANS OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, WATER MAINS, SANITARY SEWERS, AND ANY OTHER PUBLIC AND PRIVATE UTILITIES IS APPROXIMATE AND THEIR EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS, PROPERTY CORNERS AND REFERENCE MARKERS UNTIL THE OWNER, HIS AGENT OR A PROFESSIONAL LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.

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

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HIS WORK. ANY WORK THAT IS VANDALIZED OR OTHERWISE DAMAGED AND JUDGED UNACCEPTABLE BY THE ENGINEER SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

FORTY-EIGHT HOURS BEFORE STARTING EXCAVATION, THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) TO HAVE THE LOCATION OF EXISTING UTILITIES STAKED.

THE CONTRACTOR SHALL AT ALL TIMES PROVIDE PROTECTION FOR TRAFFIC AS REQUIRED BY THE APPLICATION OF TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS AND THE PLANS.

ALL WORK INVOLVING EXISTING SIGNS SHALL BE GOVERNED BY THE FOLLOWING:

- SIGNS SHALL NOT BE REMOVED UNTIL THE PROGRESS OF WORK NECESSITATES IT.
- EACH SIGN TO BE REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION APPROVED BY THE ENGINEER IN A WORKMANLIKE MANNER AND SHALL BE VISIBLE TO THE TRAFFIC FOR WHICH IT IS INTENDED. ALL SUCH SIGNS SHALL BE MAINTAINED STRAIGHT AND CLEAN FOR THE DURATION OF THE TEMPORARY SETTING.
- ALL SIGNS SHALL BE RE-ERECTED AT PERMANENT LOCATIONS AS THE COMPLETION OF THE ROADWAY IMPROVEMENTS PERMIT. LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
- ALL UNUSED SIGNS SHALL BE STORED ON THE JOBSITE FOR PICKUP BY THE STATE OR CITY.
- LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY LOCATIONS TO MAINTAIN PROPER SIGN HEIGHT. IN SUCH CASES, POSTS SHALL BE FURNISHED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

STRUCTURE LOCATIONS GIVEN ON THE PLANS ARE AS FOLLOWS:

- FOR STRUCTURES FALLING IN THE CURB & GUTTER - TO THE BACK OF CURB.
- FOR OTHER LOCATIONS - TO THE CENTER OF THE STRUCTURE.

A SOILS REPORT WAS PREPARED FOR THIS PROJECT. A COPY CAN BE VIEWED AT THE CITY OF CRYSTAL LAKE, 100 WEST WOODSTOCK ST., CRYSTAL LAKE, IL.

CONSTRUCTION

ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS OR DRAINAGE STRUCTURES WHICH OBSTRUCTS THE NATURAL FLOW OF WATER SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. PRIOR TO ACCEPTANCE OF THE IMPROVEMENT, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT.

WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN IN AN OPERATING CONDITION TEMPORARY OUTLETS AND CONNECTIONS FOR ALL DRAINS, SEWERS AND CATCH BASINS. THE CONTRACTOR SHALL PROVIDE FACILITIES WHICH HAVE THE CAPACITY TO RECEIVE AND DISCHARGE THE STORM FLOWS NORMALLY ACCEPTED AND RELEASED BY THE EXISTING FACILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT.

THE COST OF INTERCONNECTIONS BETWEEN THE PROPOSED AND EXISTING SEWER SYSTEMS AND PROPOSED AND EXISTING WATER MAIN SHALL BE INCLUDED IN THE VARIOUS UNIT PRICES OF THE PROPOSED UNITS OF WORK.

ALL FRAMES WITH CLOSED LIDS TO BE FURNISHED AS PART OF THIS CONTRACT SHALL HAVE CAST INTO THE LID THE WORD "STORM," "SANITARY" OR "WATER," AS APPROPRIATE TO THE TYPE OF STRUCTURE INVOLVED. ALL STORM SEWER FRAMES AND GRATES SHALL INCLUDE AN ENVIRONMENTAL NOTICE "DUMP NO WASTE, DRAINS TO WATERWAYS".

TRENCH BACKFILL QUANTITIES HAVE BEEN COMPUTED IN ACCORDANCE WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, BUREAU OF CONSTRUCTION TRENCH BACKFILL TABLE, BASED ON PLAN INVERT DEPTH FROM SUBGRADE. ANY TRENCH BACKFILL REQUIRED IN EXCESS OF THE QUANTITY ESTABLISHED ABOVE, INCLUDING BEDDING MATERIAL, SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

IF THE CONTRACTOR CHOOSES TO DISPOSE OF UNCANTAMINATED SOIL OR UNCONTAMINATED SOIL MIXED WITH CLEAN CONSTRUCTION AND DEMOLITION DEBRIS (CCDD) AT A CCDD FILL OPERATION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL NECESSARY FIELD AND LABORATORY ANALYSIS AND TO OBTAIN THE LICENSED PROFESSIONAL ENGINEER'S CERTIFICATION REQUIRED AS PER PUBLIC ACT 96-1416 TO USE THE SITE. NO ADDITIONAL COMPENSATION WILL BE PROVIDED.

GENERAL NOTES

ANY MATERIALS CONSIDERED SUITABLE FOR SALVAGE BY THE ENGINEER SHALL BE STORED WITHIN THE RIGHT-OF-WAY FOR LATER REMOVAL BY THE STATE OR CITY. UNUSABLE MATERIALS SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. TRENCH BACKFILL AND/OR PAVEMENT REPLACEMENT WILL BE PAID FOR WHEN THE WORK LIES UNDER EXISTING PAVEMENT AREAS.

TRENCHES ACROSS PAVED SURFACES SHALL BE PATCHED WITH EITHER PERMANENT OR TEMPORARY PAVEMENT AT THE END OF EACH WORK DAY. TEMPORARY PATCHING OF TRENCHES INCLUDING REMOVAL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE ITEM PLACED IN THE TRENCH.

MISCELLANEOUS

THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT. ANY COST INCURRED BY THE CONTRACTOR TO MEET THIS REQUIREMENT THAT IS NOT COVERED BY A SPECIFIC PAY ITEM WILL BE INCLUDED IN THE COST OF THE CONTRACT.

SAWCUTTING

A. SAWCUTTING REQUIRED FOR CLASS D PATCHES SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PATCH.

B. LONGITUDINAL SAW CUTTING FOR REMOVAL TO ACCOMMODATE WIDENING, AS SHOWN ON THE PLANS, SHALL BE PAID FOR SEPARATELY.

THE EXISTING ASPHALT SURFACE SHALL BE SAW CUT TO A DEPTH OF TWO INCHES AT THE LIMITS OF THE PROJECT.

WHERE NEW WORK IS PROPOSED TO MEET EXISTING FEATURES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD CHECK ALL DIMENSIONS AND ELEVATIONS AND NOTIFY THE ENGINEER OF DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.

ANY SHEETING AND/OR SHORING USED ON THIS IMPROVEMENT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

SEDIMENTATION AND EROSION CONTROL

SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL BE UTILIZED IN CONSIDERATION OF TIME OF YEAR, SITE CONDITIONS AND THE SUITABILITY OF TEMPORARY VERSUS PERMANENT MEASURES.

SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN FOURTEEN CALENDAR DAYS OF THE END OF THE ACTIVE HYDROLOGIC DISTURBANCE.

ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE EROSION CONTROL MEASURES.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY DAYS AFTER THE FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED BY THE CONTRACTOR AS REQUIRED BY PLAN NOTES.

IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH EFFECTIVE SEDIMENT CONTROL MEASURES (e.g., SEDIMENT TRAPS, SEDIMENT BASINS OR OTHER APPROPRIATE MEASURES). ADDITIONAL SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.

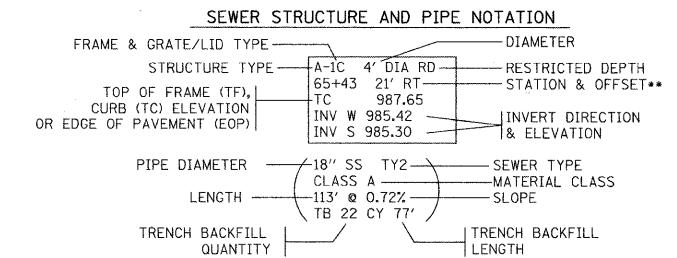
HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS
<b>PAVEMENT RESURFACING</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL 9.5mm); 2"	4% @ 70 GYR
<b>FULL-DEPTH PAVEMENT</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL 9.5mm); 2"	4% @ 70 GYR
HOT-MIX ASPHALT BASE COURSE, (HMA BINDER IL-19mm); 10.25" OR	4% @ 50 GYR
HOT-MIX ASPHALT BASE COURSE WIDENING, (HMA BINDER IL-19mm); 10.25"	(IN 4 LIFTS)
<b>PATCHING</b>	
CLASS D PATCHES (HMA BINDER IL-19mm); 11"	4% @ 70 GYR (IN 4 LIFTS)
<b>LEVELING</b>	
LEVELING BINDER (MACHINE METHOD) N70 (IL 9.5mm)	4% @ 70 GYR
<b>HMA DRIVEWAY PAVEMENT, 8"</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, (IL 9.5mm); 2"	4% @ 50 GYR
HOT-MIX ASPHALT BASE COURSE, (HMA BINDER IL-19mm); 6"	4% @ 50 GYR (IN 3 LIFTS)
<b>HMA SHOULDERS</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL 9.5mm); 2"	4% @ 70 GYR
HOT-MIX ASPHALT SHOULDERS, (HMA BINDER IL-19mm); 6"	4% @ 70 GYR (IN 3 LIFTS)

THE UNIT WEIGHT SHOULD BE USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YDIN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE SBS/SBR PG 70 22 AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE PG 64-22 UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

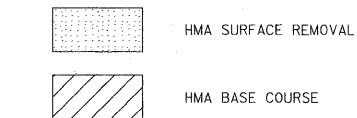
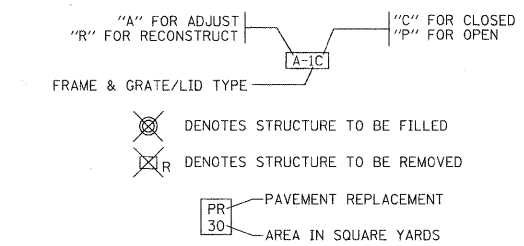
LEGEND

- EXISTING BUSH
- EXISTING DECIDUOUS TREE
- EXISTING DRAINAGE MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED INLET
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING UNDERGROUND GAS
- EXISTING UNDERGROUND WATER
- EXISTING LIGHT STANDARD
- EXISTING HANDHOLE
- MAIL BOX
- EXISTING POWER POLE



\*\* NOTE:  
-OFFSET FOR ALL STRUCTURES IS TO CENTER OF STRUCTURE.

STRUCTURE ADJUSTMENT/RECONSTRUCTION/REMOVAL NOTATION



FILE NAME = P:\2010\100174\cad\phase 2\deg\100174-shs-cover.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES AND LEGEND IL ROUTE 176 AND BRIARWOOD RD.</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = #SCALE#	DRAWN -	REVISED -			335	11-00114-00-CH	McHENRY	56	2	
	PLOT DATE = 7/19/2011	CHECKED -	REVISED -			CONTRACT NO. 63551					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

PI#	ITEM DESCRIPTION	SPECIAL PROVISION	SPECIALTY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
						STP FUNDS				
						0004	0021	0042	0021	0021
					ROADWAY	TRAFFIC SIGNALS*	TRAINEES	HIGHWAY LIGHTING	EMERGENCY VEHICLE PREEMPTION	
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)			UNIT	281	281				
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)			UNIT	465	465				
20200100	EARTH EXCAVATION			CU YD	6907	6907				
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL			CU YD	573	573				
20400800	FURNISHED EXCAVATION			CU YD	570	570				
20700220	POROUS GRANULAR EMBANKMENT			CU YD	573	573				
20800150	TRENCH BACKFILL			CU YD	453	453				
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION			SQ YD	6365	6365				
21101615	TOPSOIL FURNISH AND PLACE, 4"			SQ YD	14231	14231				
21301072	EXPLORATION TRENCH 72" DEPTH			FOOT	100	100				
21400100	GRADING AND SHAPING DITCHES	*		FOOT	300	300				
25000210	SEEDING, CLASS 2A		X	ACRE	2.2	2.2				
25000310	SEEDING, CLASS 4		X	ACRE	0.6	0.6				
25000314	SEEDING, CLASS 4B		X	ACRE	0.2	0.2				
25000400	NITROGEN FERTILIZER NUTRIENT		X	POUND	270	270				
25000600	POTASSIUM FERTILIZER NUTRIENT		X	POUND	270	270				
25100630	EROSION CONTROL BLANKET		X	SQ YD	14231	14231				
28000250	TEMPORARY EROSION CONTROL SEEDING		X	POUND	600	600				
28000305	TEMPORARY DITCH CHECKS	*		FOOT	84	84				
28000400	PERIMETER EROSION BARRIER			FOOT	6020	6020				
28000510	INLET FILTERS			EACH	6	6				
28100101	STONE RIPRAP, CLASS A1			SQ YD	8	8				
35101600	AGGREGATE BASE COURSE, TYPE B 4"			SQ YD	2909	2909				
35501325	HOT-MIX ASPHALT BASE COURSE, 10 1/4"			SQ YD	4889	4889				
35600717	HOT-MIX ASPHALT BASE COURSE WIDENING, 10 1/4"			SQ YD	1101	1101				
40201000	AGGREGATE FOR TEMPORARY ACCESS			TON	200	200				
40600100	BITUMINOUS MATERIALS (PRIME COAT)			GALLON	1322	1322				
40600300	AGGREGATE (PRIME COAT)			TON	53	53				
40600635	LEVELING BINDER (MACHINE METHOD), N70			TON	154	154				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT			SQ YD	48	48				
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70			TON	1587	1587				
44000200	DRIVEWAY PAVEMENT REMOVAL			SQ YD	955	955				
44000500	COMBINATION CURB AND GUTTER REMOVAL			FOOT	85	85				
44201777	CLASS D PATCHES, TYPE II, 11 INCH			SQ YD	1408	1408				
44213200	SAW CUTS			FOOT	5610	5610				

\* 50% STATE, 25% CITY, 25% DORR TOWNSHIP

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES IL ROUTE 176 AND BRIARWOOD RD.</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
P:\2010\100174\ced\phase 2\dwg\100174-sh-covers.dgn		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	335	11-00114-00-CH	McHENRY	56	3
PLOT SCALE = #SCALE#		CHECKED -	REVISED -		CONTRACT NO. 63551										
PLOT DATE = 8/9/2011		DATE -	REVISED -		ILLINOIS FED. AID PROJECT										

PI#	ITEM DESCRIPTION	SPECIAL PROVISION	SPECIALTY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
						STP FUNDS				
						0004	0021	0042	0021	0021
					ROADWAY	TRAFFIC SIGNALS*	TRAINEES	HIGHWAY LIGHTING	EMERGENCY VEHICLE PREEMPTION	
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT			FOOT	5535	5535				
48100700	AGGREGATE SHOULDERS, TYPE A 8"			SQ YD	2166	2166				
48203029	HOT-MIX ASPHALT SHOULDERS, 8"			SQ YD	2909	2909				
50105220	PIPE CULVERT REMOVAL			FOOT	620	620				
542A0220	PIPE CULVERTS, CLASS A, TYPE 1 15"			FOOT	138	138				
542A0223	PIPE CULVERTS, CLASS A, TYPE 1 18"			FOOT	48	48				
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"			EACH	13	13				
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"			EACH	4	4				
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"			EACH	3	3				
54247100	GRATING FOR CONCRETE FLARED END SECTION 15"	*		EACH	13	13				
54247110	GRATING FOR CONCRETE FLARED END SECTION 18"	*		EACH	4	4				
54247130	GRATING FOR CONCRETE FLARED END SECTION 24"			EACH	3	3				
550A2330	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1 15"	*		FOOT	194	194				
550A2340	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1 18"	*		FOOT	107	107				
550A2360	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1 24"	*		FOOT	66	66				
550A2520	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 2 12"	*		FOOT	65	65				
550A2560	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 2 24"	*		FOOT	162	162				
56400100	FIRE HYDRANTS TO BE MOVED	*	X	EACH	1	1				
56400300	FIRE HYDRANTS TO BE ADJUSTED	*	X	EACH	1	1				
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS			EACH	13	13				
60107600	PIPE UNDERDRAINS 4"			FOOT	900	900				
60108100	PIPE UNDERDRAINS 4" (SPECIAL)	*		FOOT	270	270				
60108300	PIPE UNDERDRAINS 8" (SPECIAL)	*		FOOT	300	300				
60200105	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, OPEN LID			EACH	3	3				
60200205	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID			EACH	1	1				
60203805	CATCH BASINS, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID			EACH	3	3				
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12			FOOT	80	80				
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS		X	FOOT	208	208				
63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS		X	FOOT	565	565				
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2		X	EACH	1	1				
63200310	GUARDRAIL REMOVAL			FOOT	767	767				
67000500	ENGINEER'S FIELD OFFICE, TYPE B			CAL MO	5	5				
67100100	MOBILIZATION			L SUM	1	1				
66900200	NON-SPECIAL WASTE DISPOSAL		X	CU YD	227	227				

\* 50% STATE, 25% CITY, 25% DORR TOWNSHIP

FILE NAME = P:\2010\100174\cod\phase 2\dwg\100174-sh-cv-cover.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES IL ROUTE 176 AND BRIARWOOD RD.</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = #SCALE#	PLOT DATE = 8/9/2011	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	McHENRY	56	3A
		CHECKED -	REVISED -								CONTRACT NO.	63551	
		DATE -	REVISED -								ILLINOIS FED. AID PROJECT		

PI#	ITEM DESCRIPTION	SPECIAL PROVISION	SPECIALTY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
						STP FUNDS				
						0004	0021	0042	0021	0021
					ROADWAY	TRAFFIC SIGNALS*	TRAINEES	HIGHWAY LIGHTING	EMERGENCY VEHICLE PREEMPTION	
66900450	SPECIAL WASTE PLANS AND REPORTS		X	L SUM	1	1				
66900530	SOIL DISPOSAL ANALYSIS		X	EACH	1	1				
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201			L SUM	1	1				
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306			L SUM	1	1				
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326			L SUM	1	1				
70300100	SHORT TERM PAVEMENT MARKING		X	FOOT	884	884				
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"		X	FOOT	25608	25608				
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"		X	FOOT	96	96				
72000100	SIGN PANEL - TYPE 1		X	SQ FT	33		33			
72000200	SIGN PANEL - TYPE 2		X	SQ FT	20		20			
72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A			EACH	1	1				
72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A			EACH	1	1				
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS		X	SQ FT	291	291				
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"		X	FOOT	14975	14975				
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"		X	FOOT	1171	1171				
78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"		X	FOOT	271	271				
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"		x	FOOT	562	562				
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"		X	FOOT	182	182				
80400100	ELECTRIC SERVICE INSTALLATION		X	EACH	1			1		
80500020	SERVICE INSTALLATION - POLE MOUNTED		X	EACH	1		1			
81000500	CONDUIT IN TRENCH, 1 1/2" DIA., GALVANIZED STEEL		X	FOOT	2700			2700		
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL		X	FOOT	651		482			169
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL		X	FOOT	252		252			
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL		X	FOOT	113		113			
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL		X	FOOT	60		60			
81018400	CONDUIT PUSHED, 1 1/2" DIA., GALVANIZED STEEL		X	FOOT	220		220			
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL		X	FOOT	210		210			
81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL		X	FOOT	55		55			
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL		X	FOOT	335		335			
81400200	HEAVY-DUTY HANDHOLE		X	EACH	14		13			1
81400300	DOUBLE HANDHOLE		X	EACH	1		1			
81702120	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8		X	FOOT	8816			8816		
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6		X	FOOT	3070			3070		
81702150	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2		X	FOOT	354			354		

• 50% STATE, 25% CITY, 25% DORR TOWNSHIP

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES IL ROUTE 176 AND BRIARWOOD RD.</b>				F.A.P. RTE. *	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
P:\2010\100174\cad\phase 2\dwg\100174-sh*cover.dgn		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	335	11-00114-00-CH	McHENRY	56	38
PLOT SCALE = #SCALE#		CHECKED -	REVISED -		CONTRACT NO. 63551										
PLOT DATE = 8/9/2011		DATE -	REVISED -		ILLINOIS FED. AID PROJECT										

PI#	ITEM DESCRIPTION	SPECIAL PROVISION	SPECIALTY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
						STP FUNDS				
						0004	0021	0042	0021	0021
					ROADWAY	TRAFFIC SIGNALS*	TRAINEES	HIGHWAY LIGHTING	EMERGENCY VEHICLE PREEMPTION	
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK		X	FOOT	3405		686		2550	169
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	*	X	EACH	16				16	
82500360	LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 100AMP	*	X	EACH	1				1	
83008600	LIGHT POLE, ALUMINUM, 40 FT. M.H., 15 FT. MAST ARM		X	EACH	16				16	
83600200	LIGHT POLE FOUNDATION, 24" DIAMETER		X	FOOT	144				144	
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE		X	EACH	16				16	
85000500	MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION	*	X	EACH	1		1			
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET		X	EACH	1		1			
86200120	UNINTERRUPTIBLE POWER SUPPLY		X	EACH	1		1			
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C		X	FOOT	431					431
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C		X	FOOT	2830		2830			
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C		X	FOOT	2073		2073			
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR		X	FOOT	2386		2386			
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C		X	FOOT	61		61			
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C		X	FOOT	1005		1005			
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.		X	EACH	2		2			
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.		X	EACH	2		2			
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.		X	EACH	1					1
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.		X	EACH	1		1			
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.		X	EACH	1		1			
87702487	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 32 FT. AND 34 FT.		X	EACH	1		1			
87702610	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 38 FT. AND 46 FT.		X	EACH	1		1			
87800100	CONCRETE FOUNDATION, TYPE A		X	FOOT	20		16			4
87800150	CONCRETE FOUNDATION, TYPE C		X	FOOT	4		4			
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	*	X	FOOT	50		50			
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED		X	EACH	6		6			
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED		X	EACH	4		4			
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED		X	EACH	6		6			
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED		X	EACH	2		2			
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM		X	EACH	12		12			
88500100	INDUCTIVE LOOP DETECTOR		X	EACH	10		10			
88600100	DETECTOR LOOP, TYPE I		X	FOOT	1300		1300			
88700200	LIGHT DETECTOR		X	EACH	3					3

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P:\2010\100174\cad\phase 2\dwg\100174-sh-cv-cover.dgn		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	335	11-00114-00-CH	McHENRY	56	3C
PLOT SCALE = #SCALE#		CHECKED -	REVISED -						CONTRACT NO. 63551						
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PI#	ITEM DESCRIPTION	SPECIAL PROVISION	SPECIALTY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
						STP FUNDS				
						0004	0021	0042	0021	0021
					ROADWAY	TRAFFIC SIGNALS*	TRAINEES	HIGHWAY LIGHTING	EMERGENCY VEHICLE PREEMPTION	
88700300	LIGHT DETECTOR AMPLIFIER		X	EACH	1					1
89502380	REMOVE EXISTING HANDHOLE	*	X	EACH	2		2			
Z0001050	AGGREGATE SUBGRADE 12"	*		SQ YD	6365	6365				
Z0004530	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 8"	*		SQ YD	701	701				
Z0076600	TRAINEES	*		HOUR	1000		1000			
A2000616	TREE, ACER PLATANOIDES (NORWAY MAPLE), 2" CALIPER, BALLED AND BURLAPPED		X	EACH	5	5				
A2001016	TREE, ACER RUBRUM (RED MAPLE), 2" CALIPER, BALLED AND BURLAPPED		X	EACH	5	5				
A2002716	TREE, CARYA OVATA (SHAGBARK HICKORY), 2" CALIPER, BALLED AND BURLAPPED		X	EACH	5	5				
A2006416	TREE, QUERCUS ALBA (WHITE OAK), 2" CALIPER, BALLED AND BURLAPPED		X	EACH	18	18				
A2007116	TREE, QUERCUS RUBRA (RED OAK), 2" CALIPER, BALLED AND BURLAPPED		X	EACH	18	18				
X0426200	DEWATERING	*		L SUM	1	1				
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	*		SQ YD	6483	6483				
X7010237	CHANGEABLE MESSAGE SIGN, SPECIAL	*	X	CAL DA	60		60			
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	*	X	FOOT	648					648

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### EARTHWORK SUMMARY

LOCATION	EARTH EXCAVATION(CY)	UNSUITABLE MATERIAL(CY)	EXCAVATION TO BE USED IN EMBANKMENT(CY)	EMBANKMENT(CY)	EARTHWORK BALANCE(CY)
ILL 176	3542	1771	1328	2622	-1294
BRIARWOOD/OHNSTAD	3365	1682	1262	538	724
TOTAL	6907	3453	2590	3160	-570

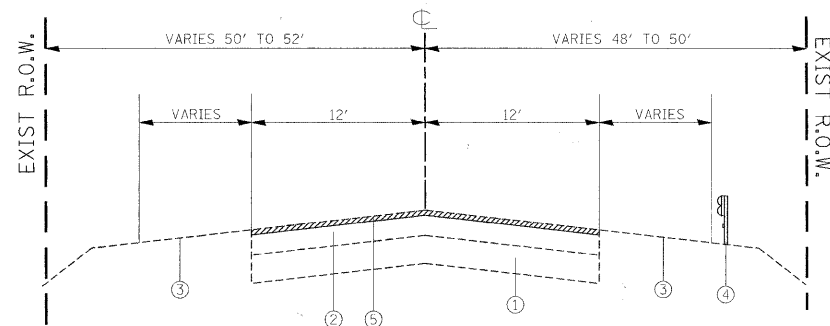
EARTH EXCAVATION (CUT) AND EMBANKMENT (FILL) FROM CROSS SECTIONS

UNSUITABLE MATERIAL ASSUMED TO BE 50% OF EXCAVATED MATERIAL

EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR 25% SHRINKAGE

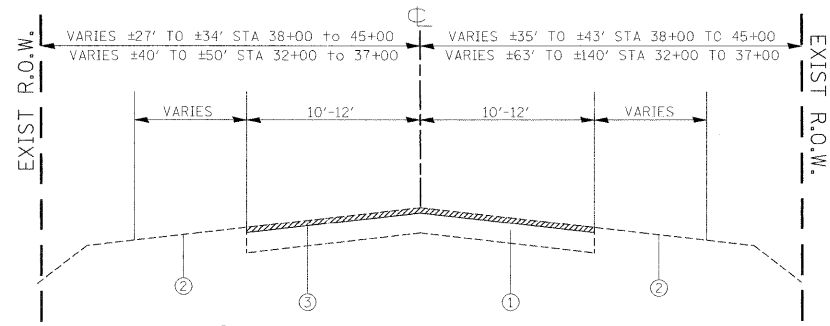
EARTHWORK BALANCE

(-) SHORTAGE  
(+) WASTE



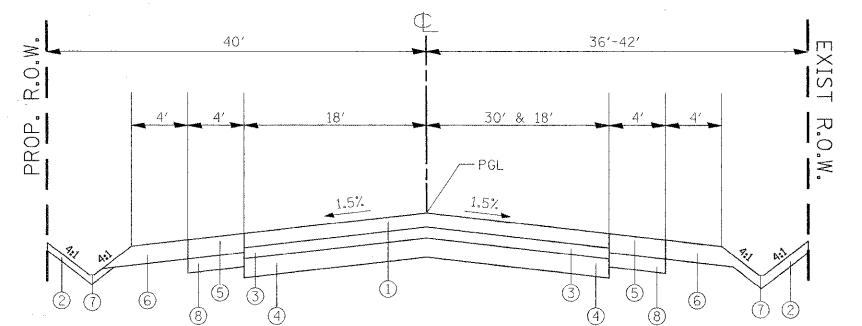
- ① EXISTING PCC BASE COURSE 7 1/2"
- ② EXISTING HMA OVERLAY 7"
- ③ EXISTING AGGREGATE SHOULDER
- ④ EXISTING GUARDRAIL STA 109+00 TO 117+50
- ⑤ HMA SURFACE REMOVAL, VARIABLE DEPTH

**Typical Existing Cross Section**  
IL 176 STATION 109+50 TO 129+01



- ① EXISTING HMA PAVEMENT 4 1/2" TO 7"
- ② EXISTING SHOULDER
- ③ HMA SURFACE REMOVAL VARIABLE DEPTH STA. 31+90 TO 33+00, 35+00 TO 35+50, 39+50 TO 40+75, 40+75 TO 44+54

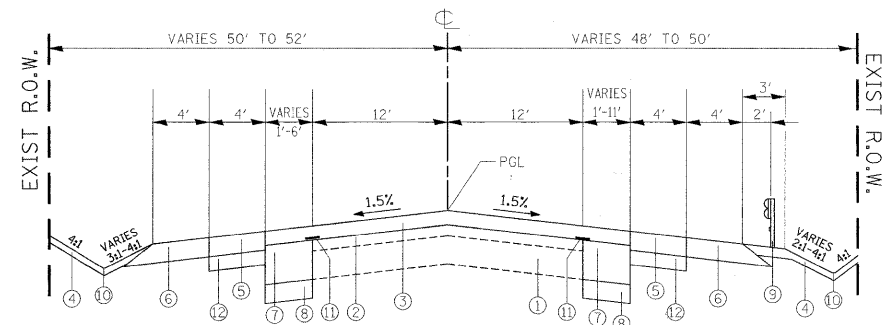
**Typical Existing Cross Section**  
BRIARWOOD ROAD/OHNSTAD ROAD  
STATION 31+90 TO 44+54



- ① 2" HMA SURFACE COURSE, MIX D, N70, IL 9.5
- ② TOPSOIL, 4" AND SEED
- ③ 10.25" HMA BASE COURSE
- ④ 12" AGGREGATE SUBGRADE
- ⑤ HMA SHOULDER, 8"
- ⑥ AGGREGATE SHOULDER, 8"
- ⑦ SWALE
- ⑧ AGGREGATE BASE COURSE, 4"

NOTE: REMOVAL OF EXISTING HMA PAVEMENT SHALL BE INCLUDED IN THE ITEM EARTH EXCAVATION

**Typical Proposed Cross Section**  
BRIARWOOD ROAD/OHNSTAD ROAD  
STATION 35+50 TO 39+50

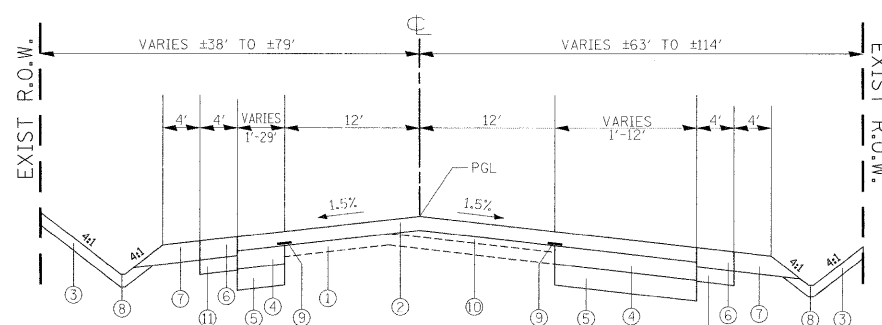


- ① EXISTING PCC BASE COURSE 7 1/2"
- ② EXISTING HMA OVERLAY
- ③ 2" HMA SURFACE COURSE, MIX D, N70, IL 9.5
- ④ TOPSOIL, 4" AND SEED
- ⑤ HMA SHOULDER, 8"
- ⑥ AGGREGATE SHOULDER, 8"
- ⑦ 10.25" HMA BASE COURSE WIDENING OR HMA BASE COURSE, SEE NOTE BELOW
- ⑧ 12" AGGREGATE SUBGRADE
- ⑨ GUARDRAIL STA 109+50 TO 117+55
- ⑩ SWALE
- ⑪ STRIP REFLECTIVE CRACK CONTROL TREATMENT
- ⑫ AGGREGATE BASE COURSE, 4"

**Typical Proposed Cross Section**  
IL 176 STATION 109+50 TO 129+01

NOTE: THE FOLLOWING AREAS SHALL BE PAID FOR AS HMA BASE COURSE WIDENING, 10.25"  
STA. 109+50 TO 117+80 LT  
STA. 109+50 TO 111+30 RT  
STA. 119+60 TO 129+01 LT  
STA. 125+90 TO 129+01 RT

THE FOLLOWING AREAS SHALL BE PAID FOR AS HMA BASE COURSE, 10.25"  
STA. 111+30 TO 125+90 RT  
STA. 117+80 TO 119+60 LT

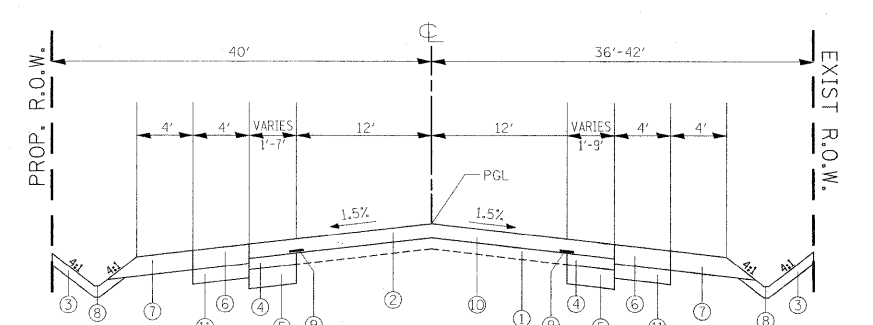


- ① EXISTING HMA PAVEMENT 4 1/2" TO 7"
- ② 2" HMA SURFACE COURSE, MIX D, N70, IL 9.5
- ③ TOPSOIL, 4" AND SEED
- ④ 10.25" HMA BASE COURSE WIDENING OR HMA BASE COURSE, SEE NOTE BELOW
- ⑤ 12" AGGREGATE SUBGRADE
- ⑥ HMA SHOULDER, 8"
- ⑦ AGGREGATE SHOULDER, 8"
- ⑧ SWALE
- ⑨ STRIP REFLECTIVE CRACK CONTROL TREATMENT
- ⑩ LEVELING BINDER, STA. 33+00 TO 35+00
- ⑪ AGGREGATE BASE COURSE, 4"

**Typical Proposed Cross Section**  
BRIARWOOD ROAD  
STATION 31+90 TO 35+50

NOTE: THE FOLLOWING AREAS SHALL BE PAID FOR AS HMA BASE COURSE WIDENING, 10.25"  
STA. 32+00 TO 33+85 LT  
STA. 32+00 TO 33+05 RT  
STA. 34+40 TO 34+70 RT

THE FOLLOWING AREAS SHALL BE PAID FOR AS HMA BASE COURSE, 10.25"  
STA. 33+65 TO 35+50 LT  
STA. 33+05 TO 34+40 RT



- ① EXISTING HMA PAVEMENT 4 1/2" TO 7"
- ② 2" HMA SURFACE COURSE, MIX D, N70, IL 9.5
- ③ TOPSOIL, 4" AND SEED
- ④ 10.25" HMA BASE COURSE WIDENING OR HMA BASE COURSE, SEE NOTE BELOW
- ⑤ 12" AGGREGATE SUBGRADE
- ⑥ HMA SHOULDER, 8"
- ⑦ AGGREGATE SHOULDER, 8"
- ⑧ SWALE
- ⑨ STRIP REFLECTIVE CRACK CONTROL TREATMENT
- ⑩ LEVELING BINDER STA. 40+75 TO 41+75
- ⑪ AGGREGATE BASE COURSE, 4"

**Typical Proposed Cross Section**  
OHNSTAD ROAD  
STATION 39+50 TO 44+54

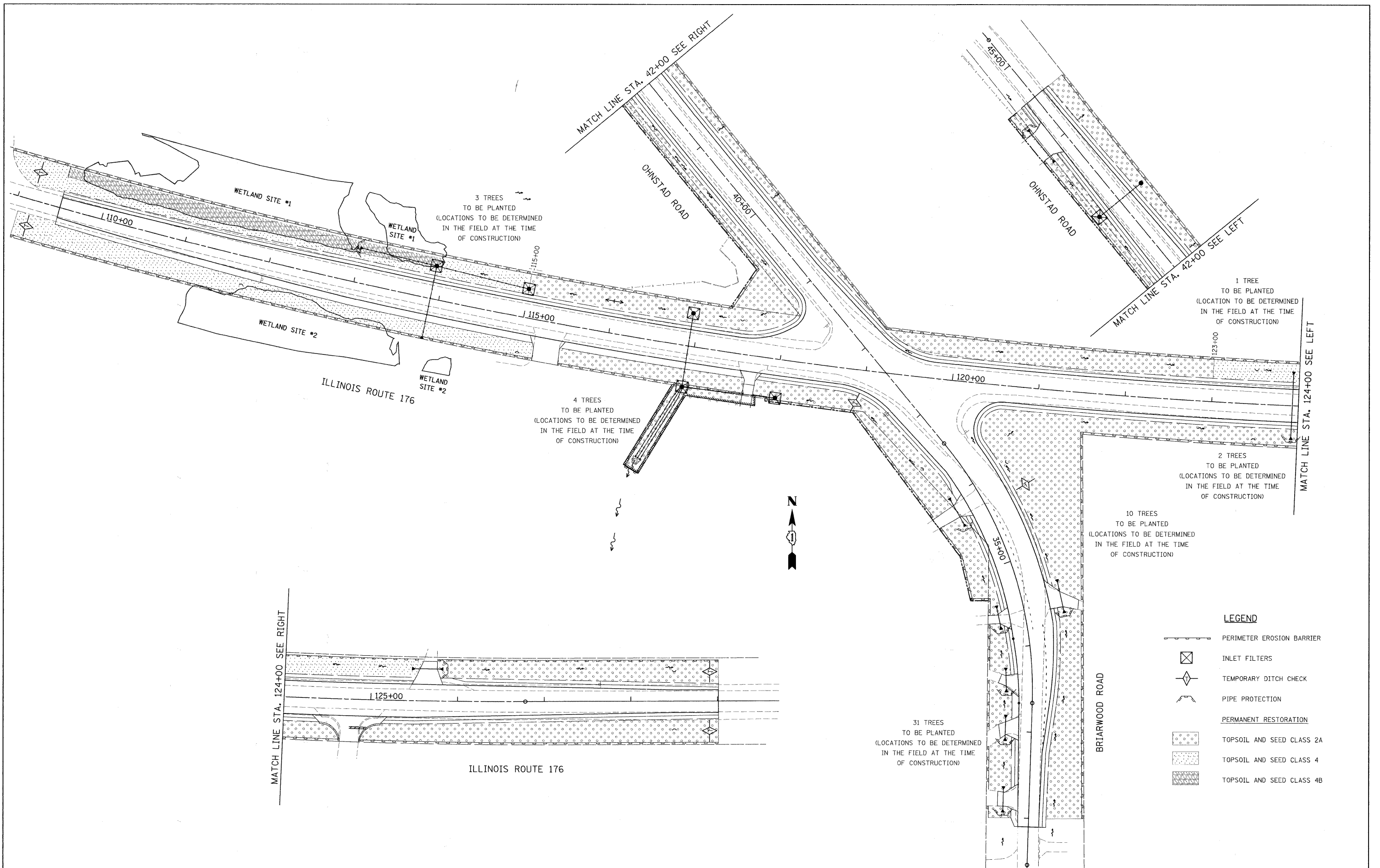
NOTE: THE FOLLOWING AREAS SHALL BE PAID FOR AS HMA BASE COURSE WIDENING, 10.25"  
STA. 42+50 TO 44+54 LT  
STA. 43+50 TO 44+54 RT

THE FOLLOWING AREAS SHALL BE PAID FOR AS HMA BASE COURSE, 10.25"  
STA. 39+50 TO 42+50 LT  
STA. 39+50 TO 43+50 RT








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P:\2010\100174\cod\phase 2\dwg\100174-shc-typical.dgn	PLOT SCALE = #SCALE#	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	
	PLOT DATE = 7/19/2011	CHECKED -	REVISED -									
		DATE -	REVISED -									
CONTRACT NO. 63551												







**LEGEND**

-  PERIMETER EROSION BARRIER
-  INLET FILTERS
-  TEMPORARY DITCH CHECK
-  PIPE PROTECTION
- PERMANENT RESTORATION**
-  TOPSOIL AND SEED CLASS 2A
-  TOPSOIL AND SEED CLASS 4
-  TOPSOIL AND SEED CLASS 4B

FILE NAME =  
 P:\2010\100174\cad\phase 2\dwg\100174-erossion.dwg

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 PLOT SCALE = #SCALE#  
 PLOT DATE = 7/19/2011

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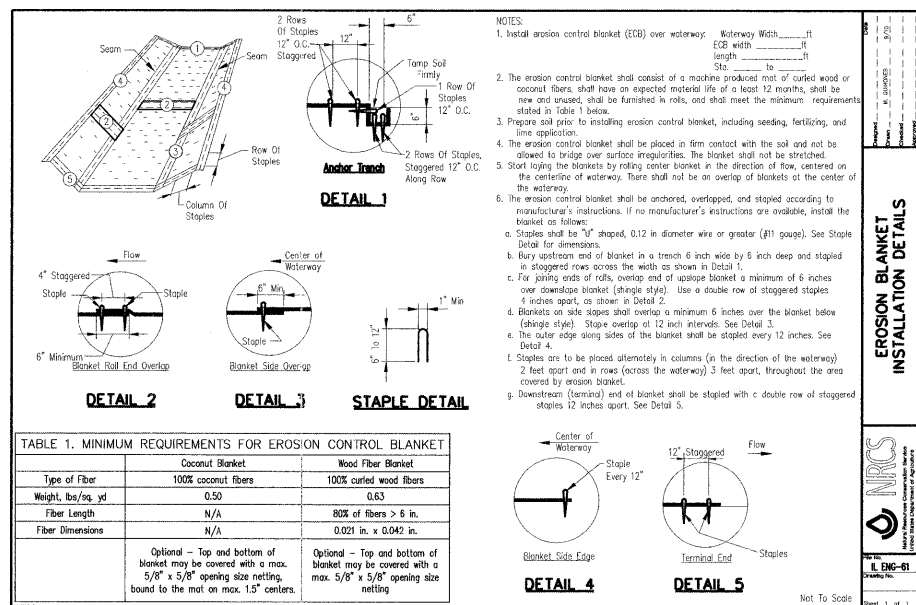
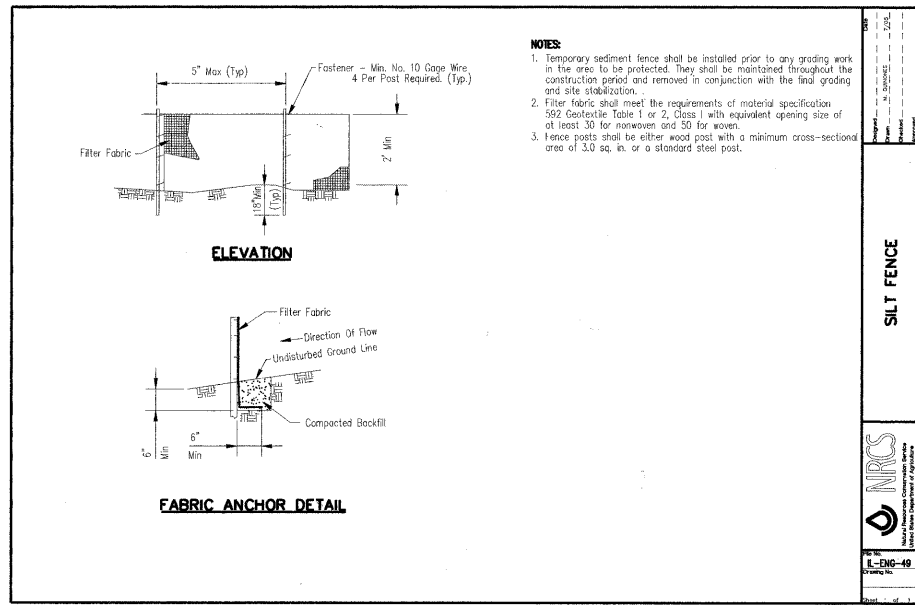
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL AND LANDSCAPING PLAN  
 IL ROUTE 176 AND BRIARWOOD RD.**

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	McHENRY	56	6
CONTRACT NO. 63551				
ILLINOIS FED. AID PROJECT				



I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS \_\_\_\_\_ OF THIS CERTIFICATION.

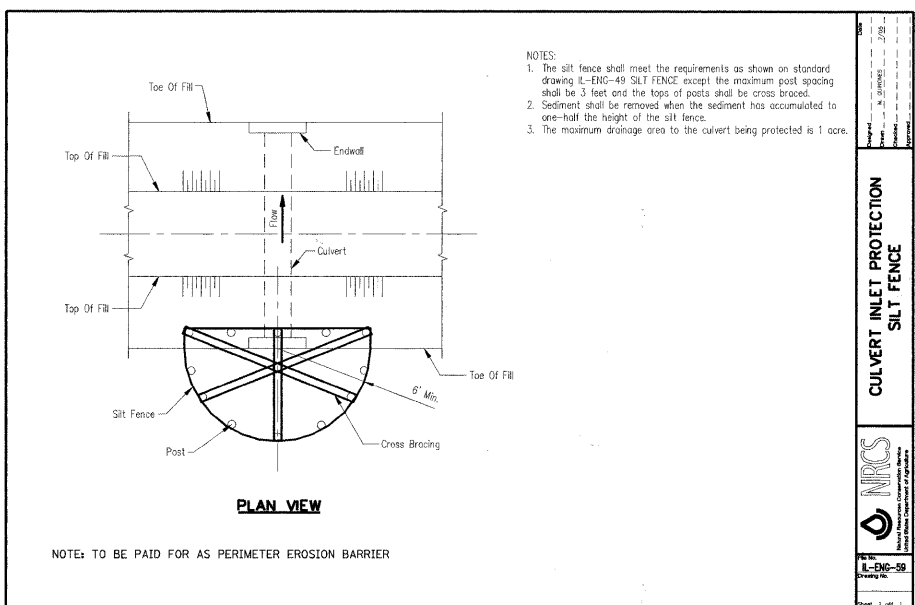
NAME OF PRIME CONTRACTOR \_\_\_\_\_ AUTHORIZED REPRESENTATIVE SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

NAME OF SUBCONTRACTOR \_\_\_\_\_ AUTHORIZED REPRESENTATIVE SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

NAME OF SUBCONTRACTOR \_\_\_\_\_ AUTHORIZED REPRESENTATIVE SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

NAME OF SUBCONTRACTOR \_\_\_\_\_ AUTHORIZED REPRESENTATIVE SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

NAME OF SUBCONTRACTOR \_\_\_\_\_ AUTHORIZED REPRESENTATIVE SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_



**GENERAL NOTES**

A. THE CONSTRUCTION LIMITS WILL BE STAKED BY THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION. THE CONSTRUCTION LIMITS MAY BE ADJUSTED BY THE ENGINEER TO PRESERVE TREES AND NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR CHANGED CONSTRUCTION LIMITS.

B. PERIMETER EROSION BARRIER SHALL BE ERECTED ADJACENT TO THE CONSTRUCTION LIMITS. THE RESIDENT ENGINEER SHALL MAKE THE FINAL DETERMINATION ON THE PLACEMENT AND LOCATION OF THE PERIMETER EROSION BARRIER.

C. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE. ALL CHANGES TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL BE NOTED ON THE SITE PLAN.

D. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.

E. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

F. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 14 CALENDAR DAYS OF THE END OF ACTIVE HYDROLOGIC DISTURBANCE, OR RE-DISTURBANCE. A QUANTITY OF TEMPORARY EROSION CONTROL SEEDING IS INCLUDED FOR AREAS THAT ARE DISTURBED BUT WILL NOT BE RESTORED WITHIN 14 DAYS.

G. AREAS OR EMBANKMENTS HAVING SLOPES GREATER THAN 4H:1V, OR THE BOTTOM 2' OF A OVERLAND DRAINAGE WAY SHALL BE STABILIZED WITH SOD, MAT OR BLANKET IN COMBINATION WITH SEEDING.

H. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED, BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.

I. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, AS APPROVED BY THE ENGINEER.

J. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PRIME CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR. THE CONTRACTOR SHALL INSPECT ALL SOIL EROSION CONTROL MEASURES ON A WEEKLY BASIS OR AFTER A ONE-HALF INCH RAINFALL AND REPLACE, REPAIR OR CLEAN THEM ON A TIMELY BASIS.

K. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. ALL PRECAUTIONS SHALL BE TAKEN TO AVOID TRACKING DURING CONSTRUCTION.

L. SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES OR ISOLATED WATERS OF McHENRY COUNTY. STOCKPILES OF SOIL AND OTHER BUILDING MATERIALS TO REMAIN IN PLACE MORE THAN THREE (3) DAYS SHALL BE FURNISHED WITH EROSION AND SEDIMENT CONTROL MEASURES (I.E. PERIMETER SILT FENCE). STOCKPILES TO REMAIN IN PLACE FOR 30 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.

M. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, SILT FILTER BAG (SPECIAL) OR OTHER APPROPRIATE MEASURE).

N. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.

O. THE CONDITION OF THE CONSTRUCTION SITE FOR WINTER SHUTDOWN SHALL BE ADDRESSED EARLY IN THE FALL GROWING SEASON SO THAT SLOPES AND OTHER BARE EARTH AREAS MAY BE STABILIZED WITH TEMPORARY AND/OR PERMANENT VEGETATIVE COVER FOR PROPER EROSION AND SEDIMENT CONTROL. ALL OPEN AREAS THAT ARE TO REMAIN IDLE THROUGHOUT THE WINTER SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES INCLUDING TEMPORARY SEEDING, MULCHING AND/OR EROSION CONTROL BLANKET PRIOR TO THE END OF THE FALL GROWING SEASON. THE AREAS TO BE WORKED BEYOND THE END OF THE GROWING SEASON MUST INCORPORATE SOIL STABILIZATION MEASURES THAT DO NOT RELY ON VEGETATIVE COVER SUCH AS EROSION CONTROL BLANKET AND HEAVY MULCHING.

P. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE LATEST EDITION OF THE ILLINOIS URBAN MANUAL.

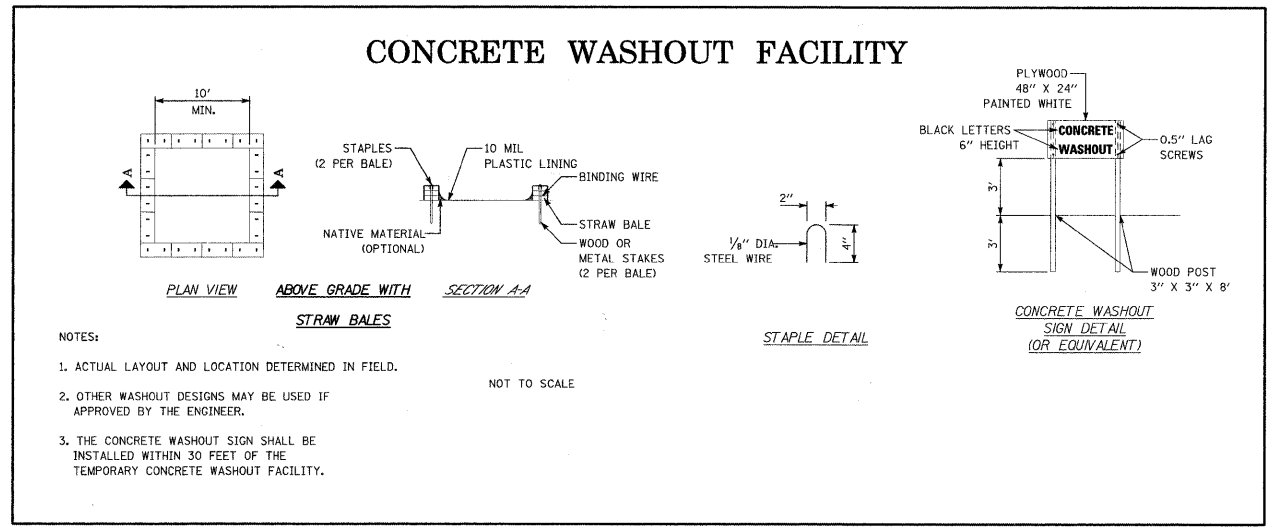
Q. THE McHENRY COUNTY SOIL AND WATER CONSERVATION DISTRICT (MCSWCD) MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. CONTACT TOM MATTINGLY AT 815-338-0099.

R. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO, ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS) A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE OWNER FOR REVIEW BY THE MCSWCD.

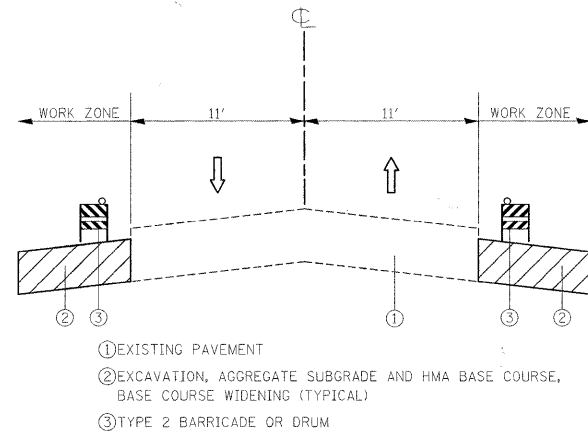
S. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE MCSWCD.

T. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO INFORM ANY SUB-CONTRACTOR(S) WHO MAY PERFORM WORK ON THIS PROJECT, OF THE REQUIREMENTS IN IMPLEMENTING AND MAINTAINING THESE EROSION CONTROL PLANS AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS SET FORTH BY THE ILLINOIS EPA.

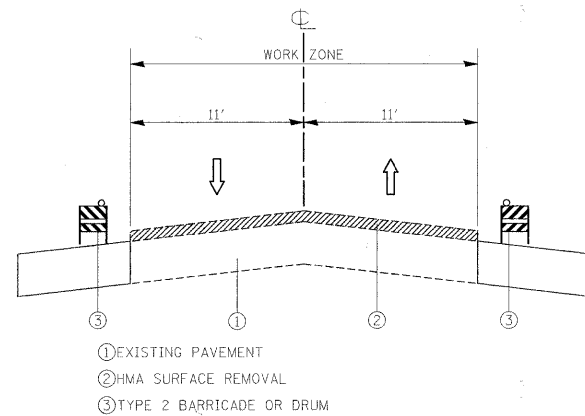
U. ALL DISTURBED AREAS SHALL BE RESTORED WITH 4 INCHES OF TOPSOIL AND SEED MIXES AS SPECIFIED.







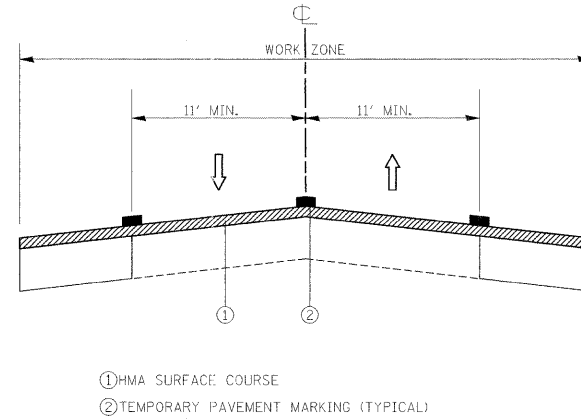
**IL 176 MAINTENANCE OF TRAFFIC**  
STAGE 1 TYPICAL SECTION



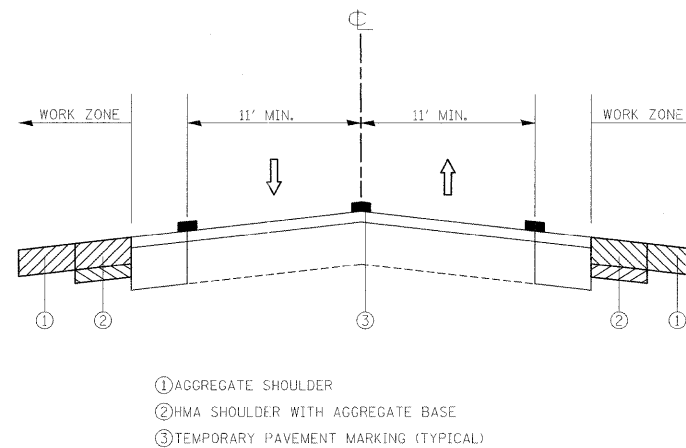
**IL 176 MAINTENANCE OF TRAFFIC**  
STAGE 2 TYPICAL SECTION

STAGE 1: EXCAVATE AND PLACE HMA BASE COURSE OR BASE COURSE WIDENING USING STANDARD 701326 WITH FLAGGERS.

STAGE 2: REMOVE EXISTING HMA SURFACE USING STANDARD 701306 WITH FLAGGERS.



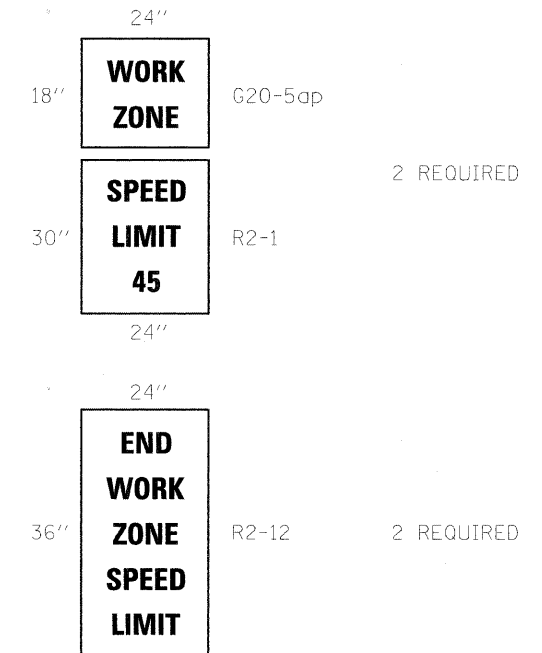
**IL 176 MAINTENANCE OF TRAFFIC**  
STAGE 3 TYPICAL SECTION



**IL 176 MAINTENANCE OF TRAFFIC**  
STAGE 4 TYPICAL SECTION

STAGE 3: PLACE FINAL SURFACE OVER EXISTING PAVEMENT AND WIDENING USING STANDARD 701306 WITH FLAGGERS.

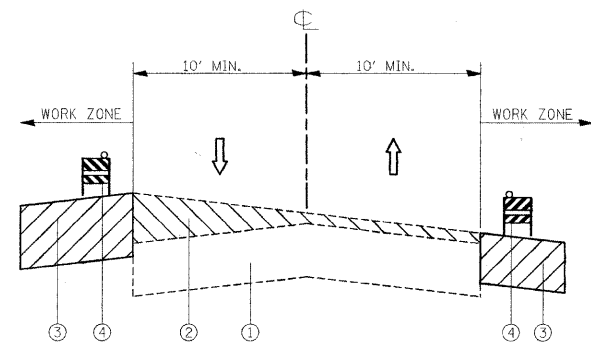
STAGE 4: EXCAVATE FOR SHOULDERS AND PLACE HMA SHOULDERS AND AGGREGATE SHOULDERS.



WORK ZONE SPEED LIMIT SIGNS SHALL BE PLACED ON ILLINOIS 176 IN ADVANCE OF THE START OF CONSTRUCTION.

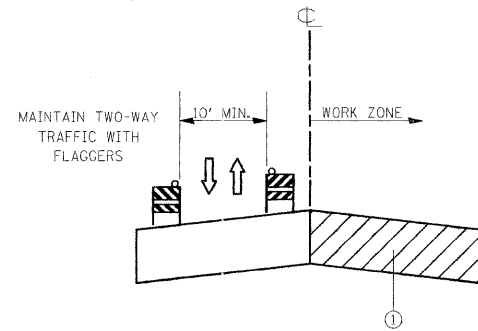
END WORK ZONE SPEED LIMIT SIGNS SHALL BE PLACED ON ILLINOIS 176 AT THE END OF CONSTRUCTION.

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC IL ROUTE 176 AND BRIARWOOD RD.</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P:\2010\100174\ced\phase 2\deg\100174-shy-staging-tpw\cel.dgn		DRAWN -	REVISED -		335	11-00114-00-CH	McHENRY	56	9			
PLOT SCALE = #SCALE#		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 63551				
PLOT DATE = 7/18/2011		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



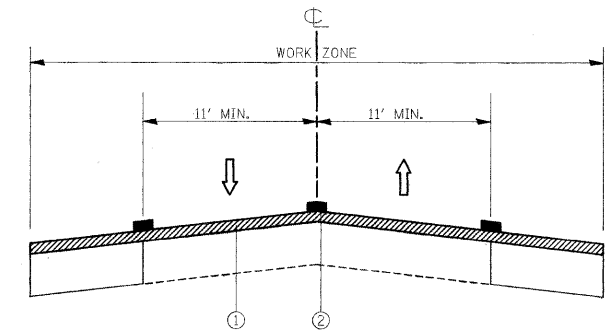
- ① EXISTING PAVEMENT
- ② LEVEL BINDER-STAGE 1
- ③ EXCAVATION, AGGREGATE SUBGRADE, HMA BASE COURSE, OR HMA BASE COURSE WIDENING-STAGE 2
- ④ TYPE 2 BARRICADE OR DRUM

**BRIARWOOD / OHNSTAD MAINTENANCE OF TRAFFIC STAGES 1 & 2 TYPICAL SECTION**



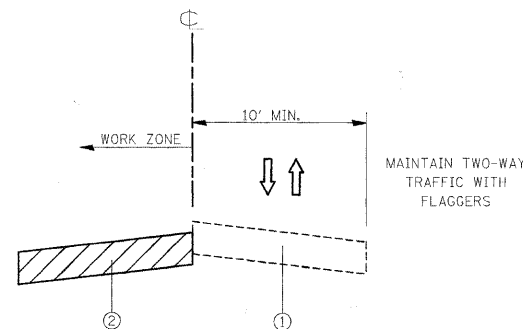
- ① PAVEMENT REMOVAL, EXCAVATION AGGREGATE SUBGRADE AND HMA BASE COURSE
- ② HMA SURFACE REMOVAL

**BRIARWOOD / OHNSTAD MAINTENANCE OF TRAFFIC STAGE 3B TYPICAL SECTION**



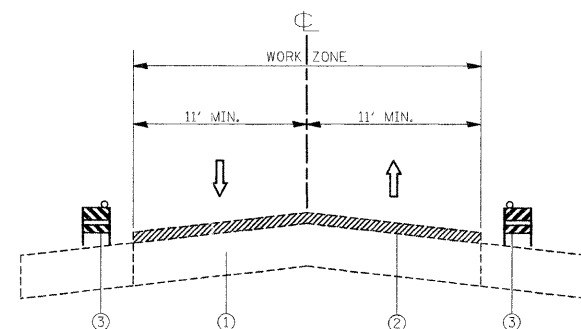
- ① HMA SURFACE COURSE
- ② TEMPORARY PAVEMENT MARKING (TYPICAL)

**BRIARWOOD / OHNSTAD MAINTENANCE OF TRAFFIC STAGE 5 TYPICAL SECTION**



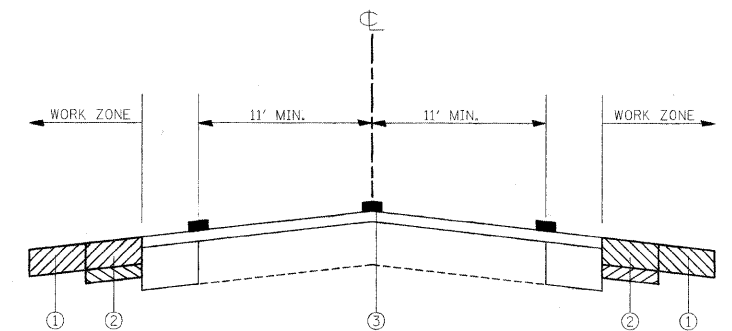
- ① EXISTING PAVEMENT
- ② PAVEMENT REMOVAL, EXCAVATION, AGGREGATE SUBGRADE AND HMA BASE COURSE

**BRIARWOOD / OHNSTAD MAINTENANCE OF TRAFFIC STAGE 3A TYPICAL SECTION**



- ① EXISTING PAVEMENT
- ② HMA SURFACE REMOVAL
- ③ TYPE 2 BARRICADE OR DRUM

**BRIARWOOD / OHNSTAD MAINTENANCE OF TRAFFIC STAGE 4 TYPICAL SECTION**



- ① AGGREGATE SHOULDER
- ② HMA SHOULDER
- ③ TEMPORARY PAVEMENT MARKING (TYPICAL)

**BRIARWOOD / OHNSTAD MAINTENANCE OF TRAFFIC STAGE 6 TYPICAL SECTION**

STAGE 1: PLACE LEVEL BINDER ON EXISTING PAVEMENT FROM STA. 33+00 TO STA. 35+00 AND STA. 40+75 TO STA. 41+75 USING STANDARD 701306 WITH FLAGGERS.

STAGE 2: EXCAVATE AND PLACE AGGREGATE SUBGRADE, HMA BASE COURSE OR BASE COURSE WIDENING FROM STA. 31+90 TO STA. 35+50 AND STA. 39+50 TO 44+54 USING STANDARD 701326 WITH FLAGGERS.

STAGE 3: REMOVE EXISTING PAVEMENT FROM STA. 35+50 TO STA. 37+30 AND STA. 38+20 TO STA. 39+50 AND PLACE AGGREGATE SUBGRADE AND HMA BASE COURSE USING STANDARD 701306 WITH FLAGGERS.

STAGE 4: REMOVE EXISTING HMA SURFACE USING STANDARD 701306 WITH FLAGGERS.

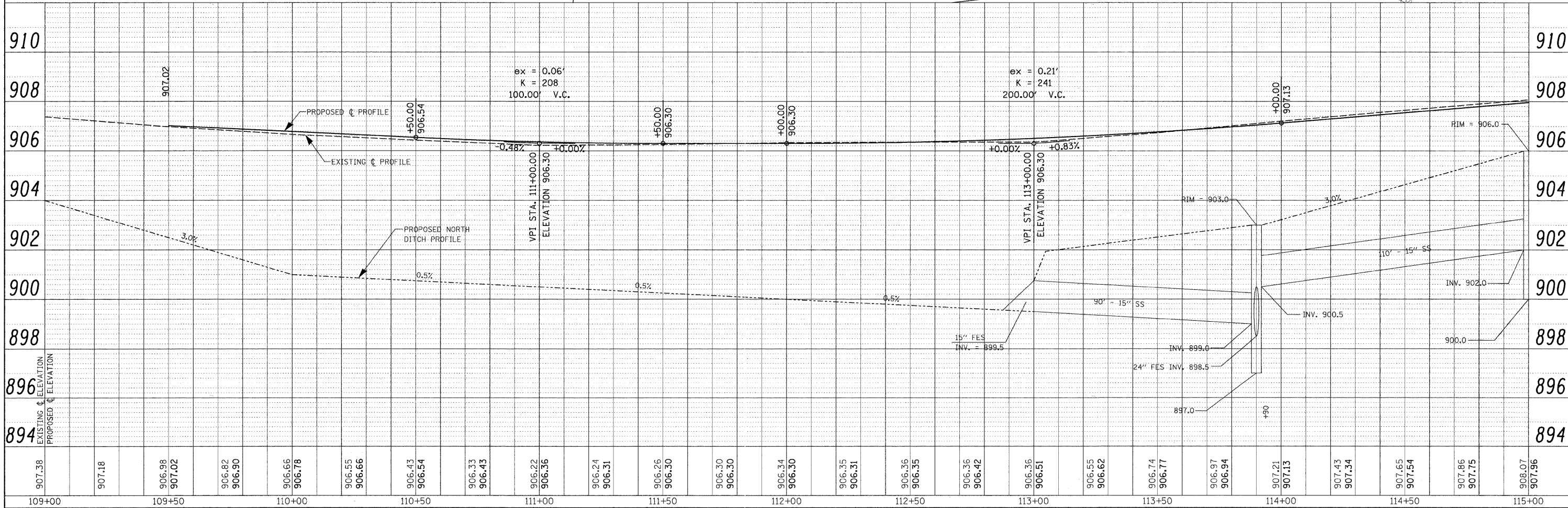
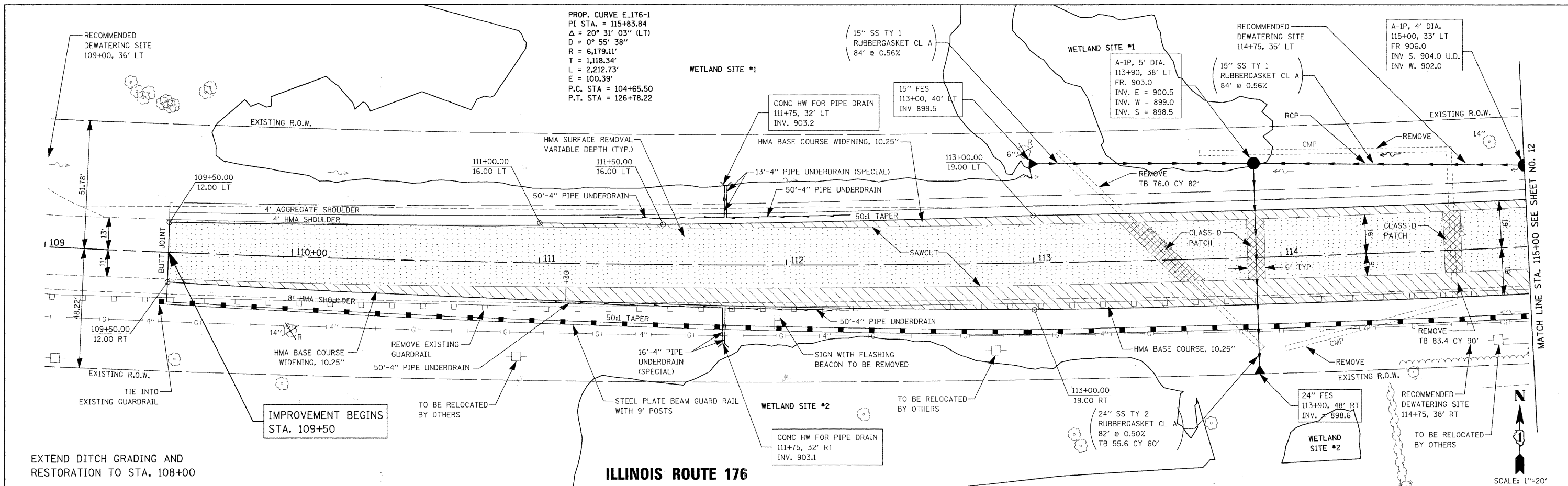
STAGE 5: PLACE FINAL SURFACE OVER EXISTING PAVEMENT, HMA WIDENING AND HMA BASE COURSE USING STANDARD 701306 WITH FLAGGERS.

STAGE 6: EXCAVATE FOR SHOULDERS AND PLACE HMA SHOULDERS AND AGGREGATE SHOULDERS.

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC IL ROUTE 176 AND BRIARWOOD RD.</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 7/1/2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE:		SHEET NO. OF SHEETS		STA. TO STA.			

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	
CADD FILE NAME	

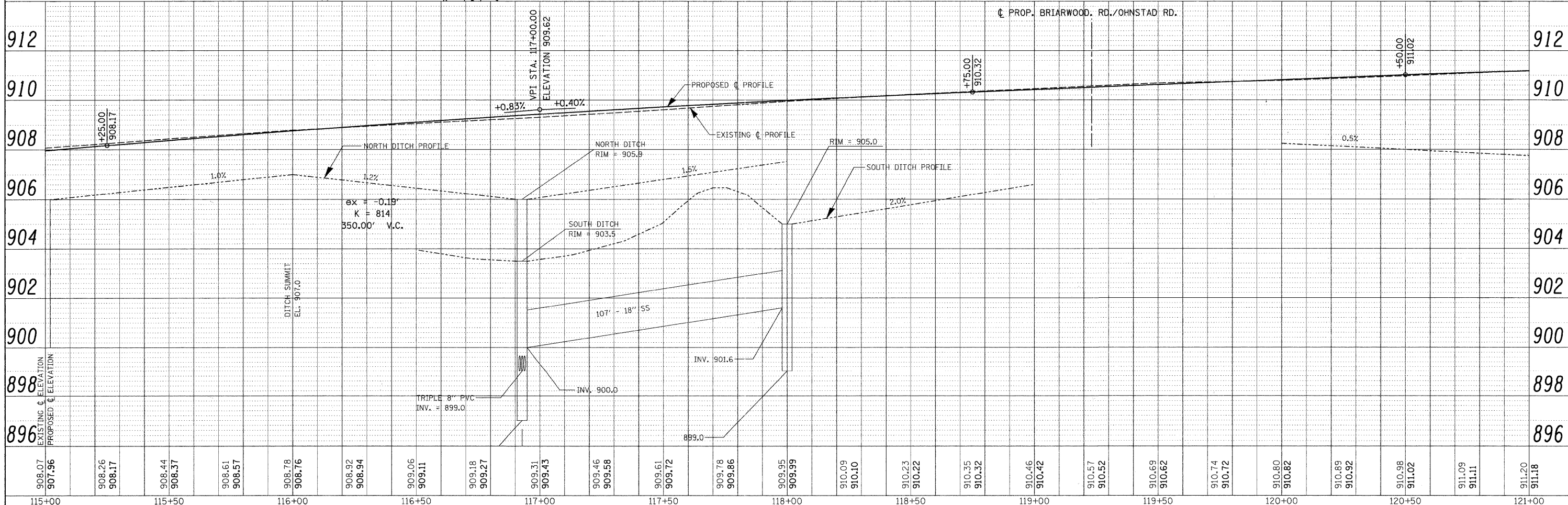
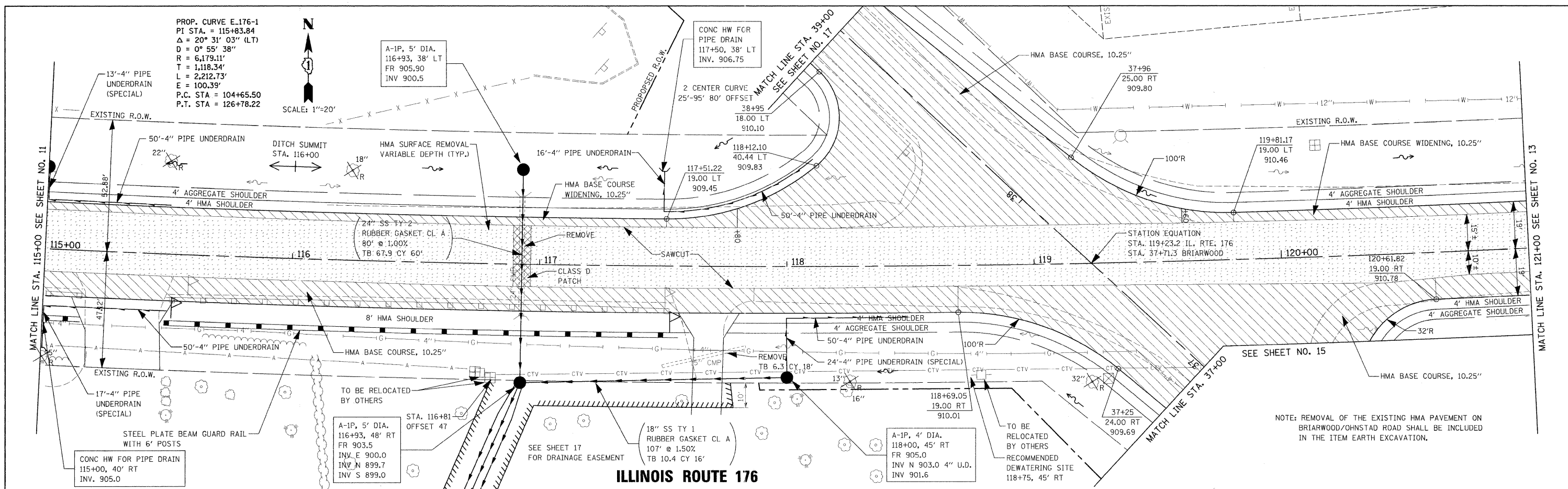
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FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED - 02/09/2011	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>IL ROUTE 176 PLAN AND PROFILE</b> <b>IL ROUTE 176 AND BRIARWOOD RD.</b>			F.A.P. R.T.E. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 11
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DATE	
BY	
PLAN	
DATE	
BY	
NOTE BOOK	
NO.	
STRUCTURE	
NOTATION	
CHKD	

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FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED - 02/09/2011	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>IL ROUTE 176 PLAN AND PROFILE</b> <b>IL ROUTE 176 AND BRIARWOOD RD.</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT SCALE = #SCALE#		CHECKED -	REVISED -			CONTRACT NO. 63551					
PLOT DATE = 7/16/2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					



PROP. CURVE E.176-1  
 PI STA. = 115+83.84  
 $\Delta = 20^\circ 31' 03''$  (LT)  
 $D = 0^\circ 55' 38''$   
 $R = 6,179.11'$   
 $T = 1,118.34'$   
 $L = 2,212.73'$   
 $E = 100.39'$   
 P.C. STA = 104+65.50  
 P.T. STA = 126+78.22

CONC HW FOR PIPE DRAIN  
 123+50, 40' LT  
 INV. 908.0

24" FES  
 123+93, 39' LT  
 INV 906.5

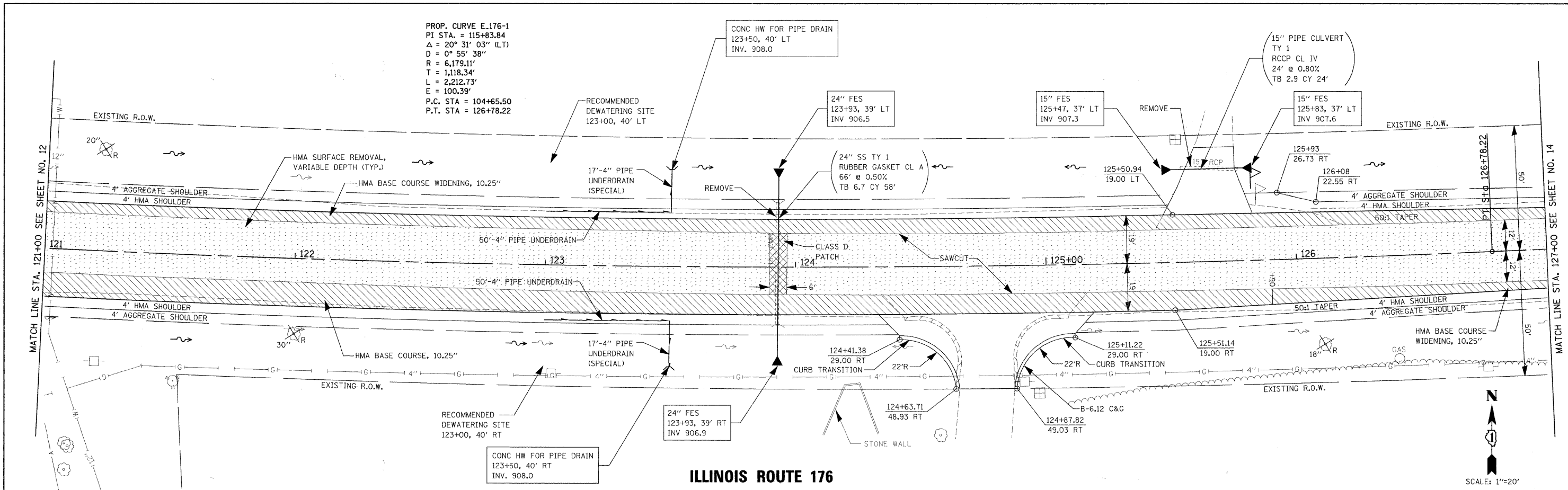
15" FES  
 125+47, 37' LT  
 INV 907.3

15" PIPE CULVERT  
 TY 1  
 RCCP CL IV  
 24'  $\phi$  0.80%  
 TB 2.9 CY 24'

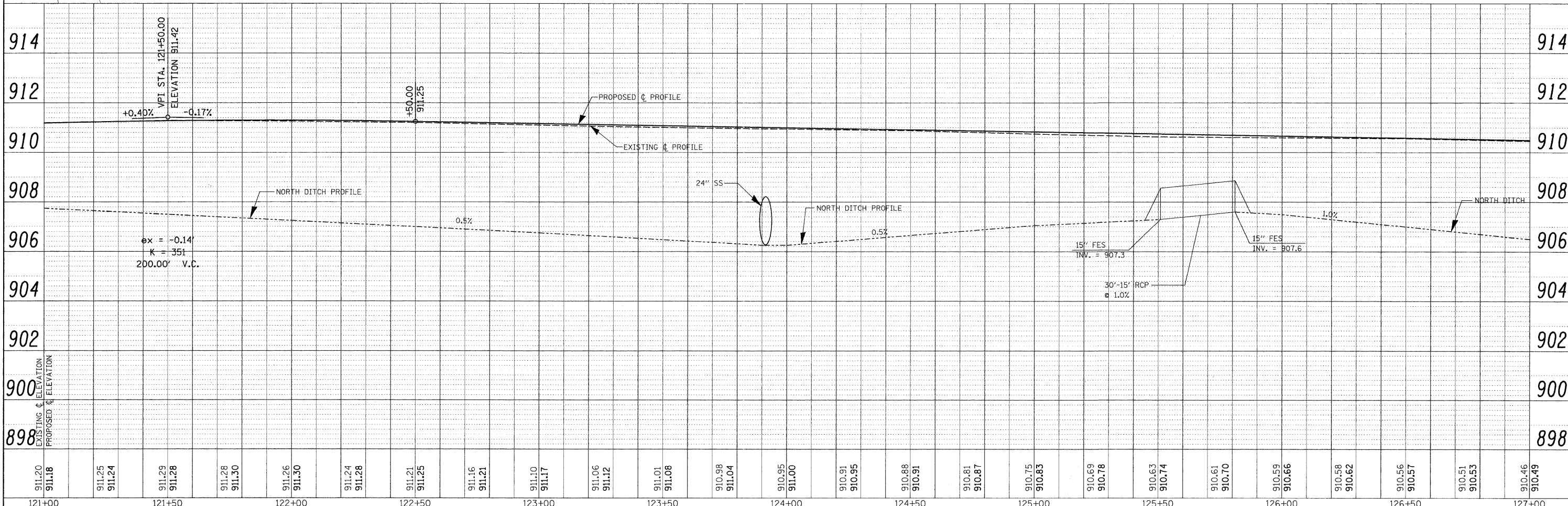
15" FES  
 125+83, 37' LT  
 INV 907.6

PLAN	REVIEWED	BY	DATE
	PLOTTED		
	ALIGNMENT CHECKED		
	NOTE BOOK		
	NO.		
	ADD FILE NAME		

PROFILE	REVIEWED	BY	DATE
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	NOTE BOOK		
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	STRUCTURE NOTATIONS CHKD		



**ILLINOIS ROUTE 176**

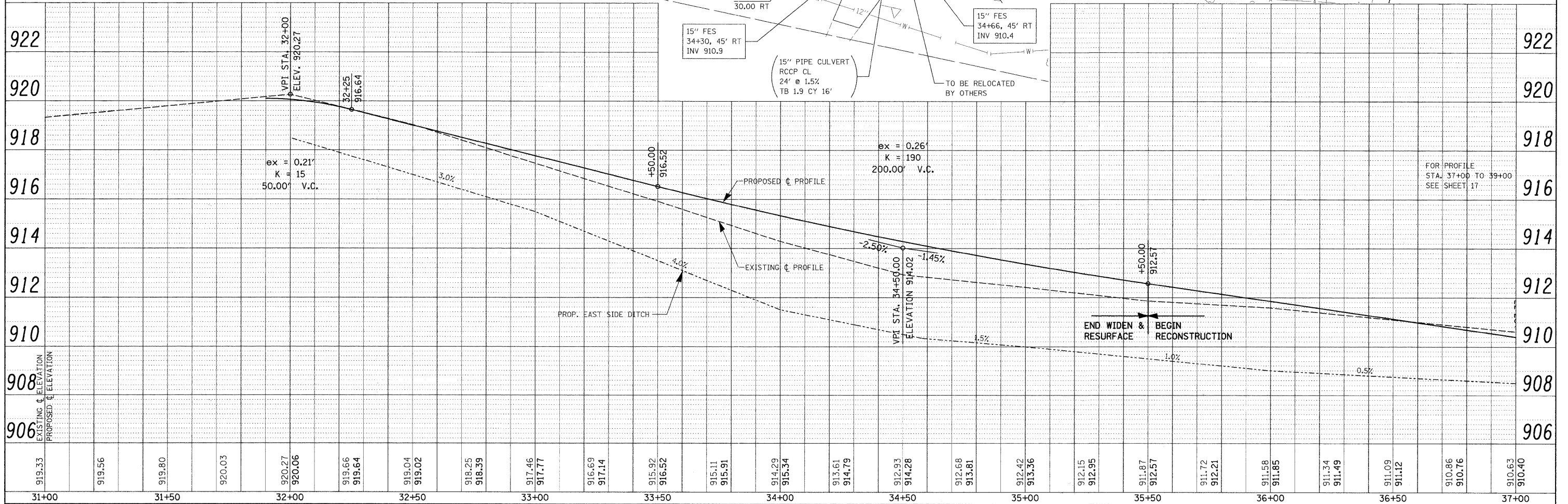
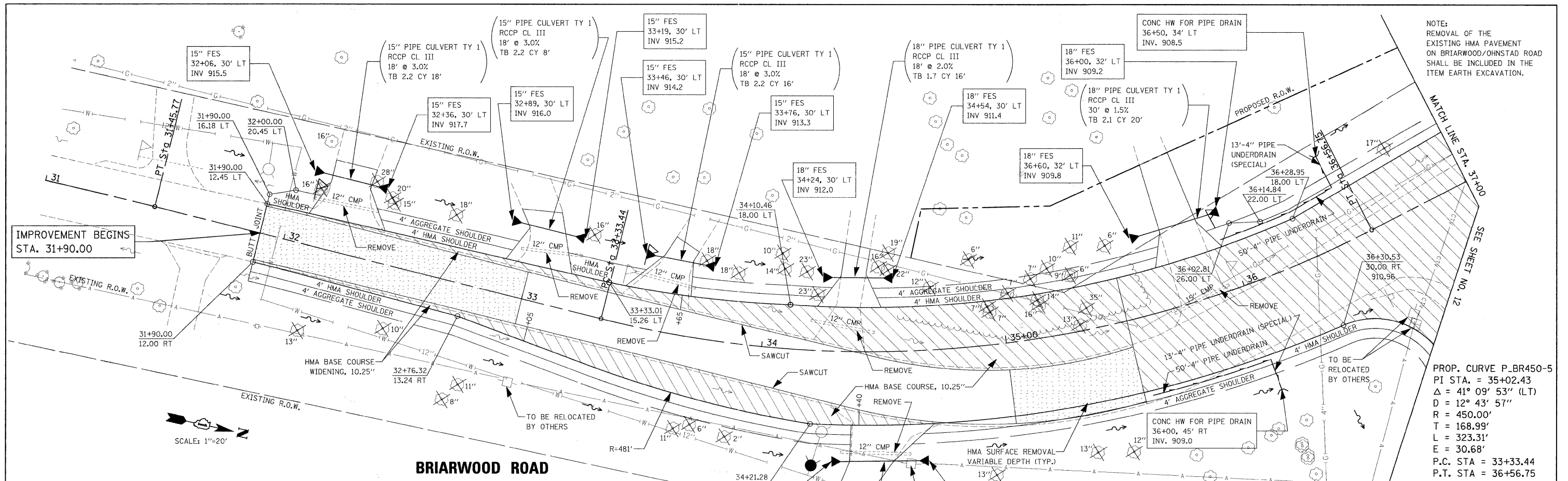


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		DATE -	REVISED -							ILLINOIS FED. AID PROJECT		



DATE	
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REVIEWED	
PLANNING	
DESIGN	
CONSTRUCTION	
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PLANNING	
DESIGN	
CONSTRUCTION	
NO. _____	

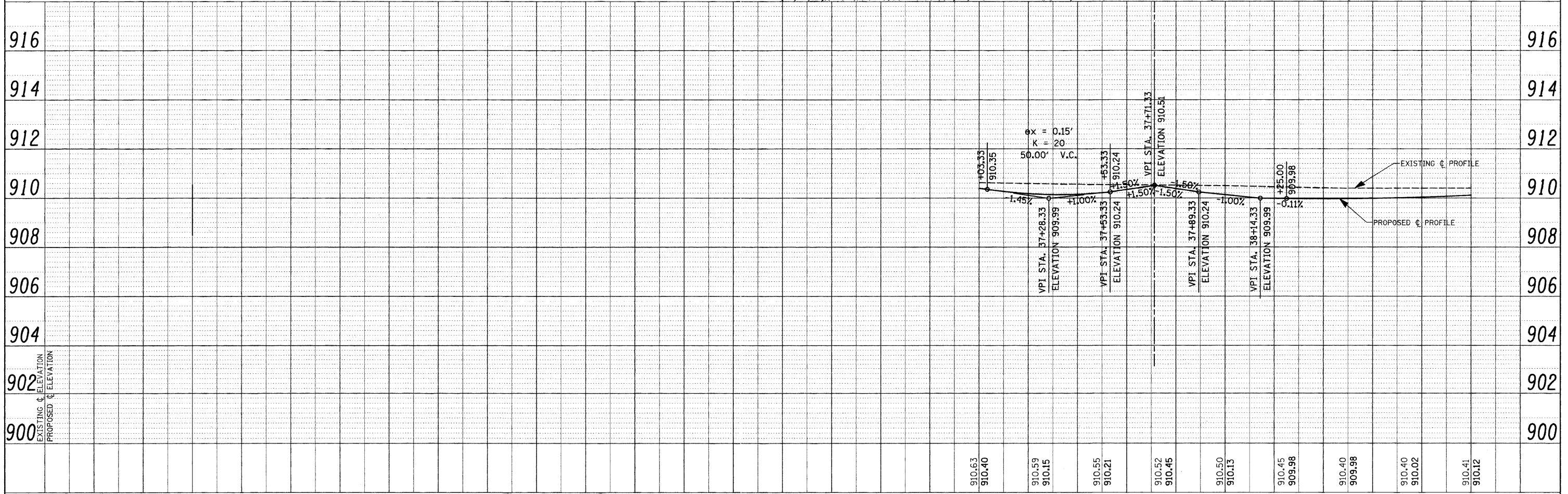
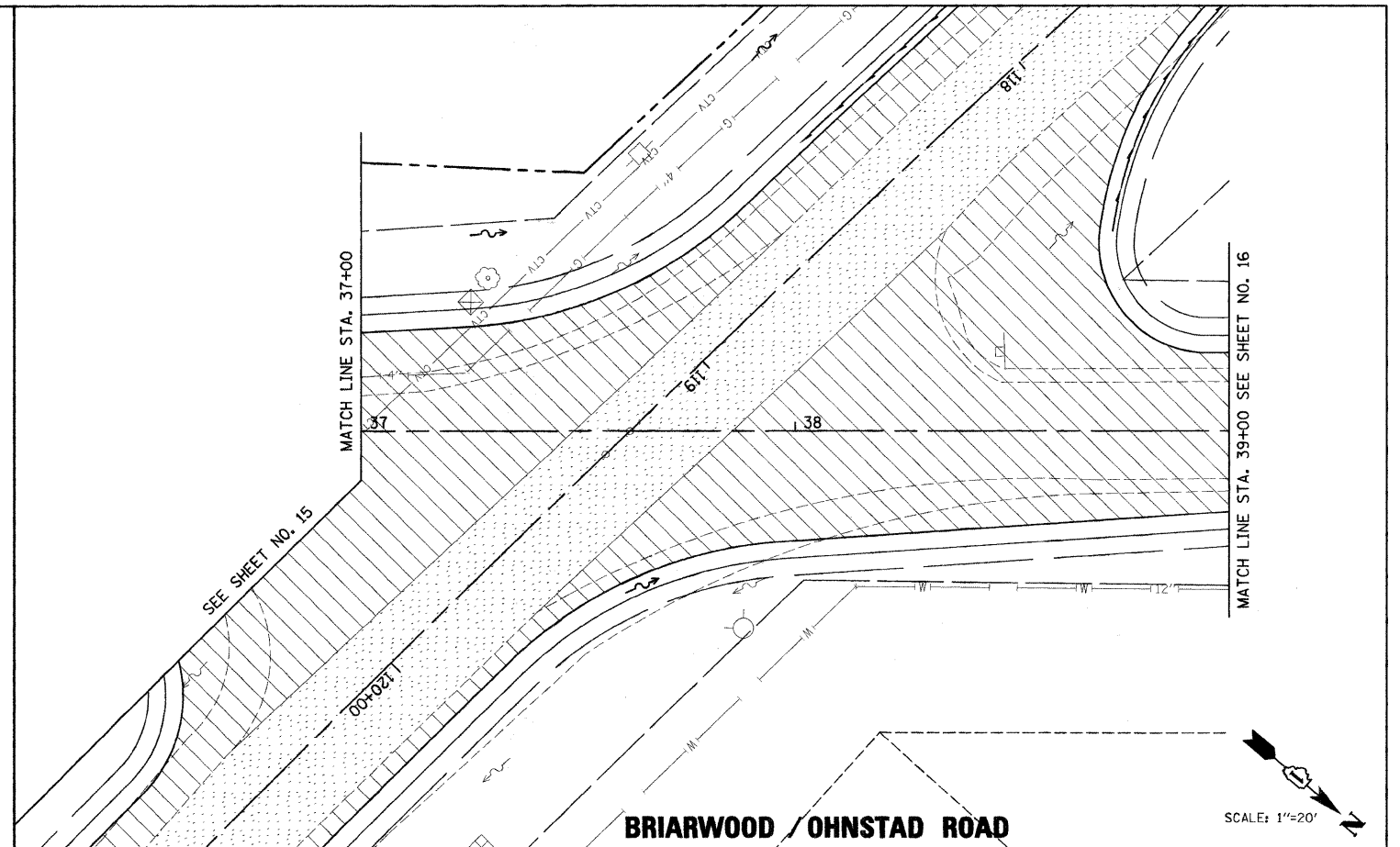
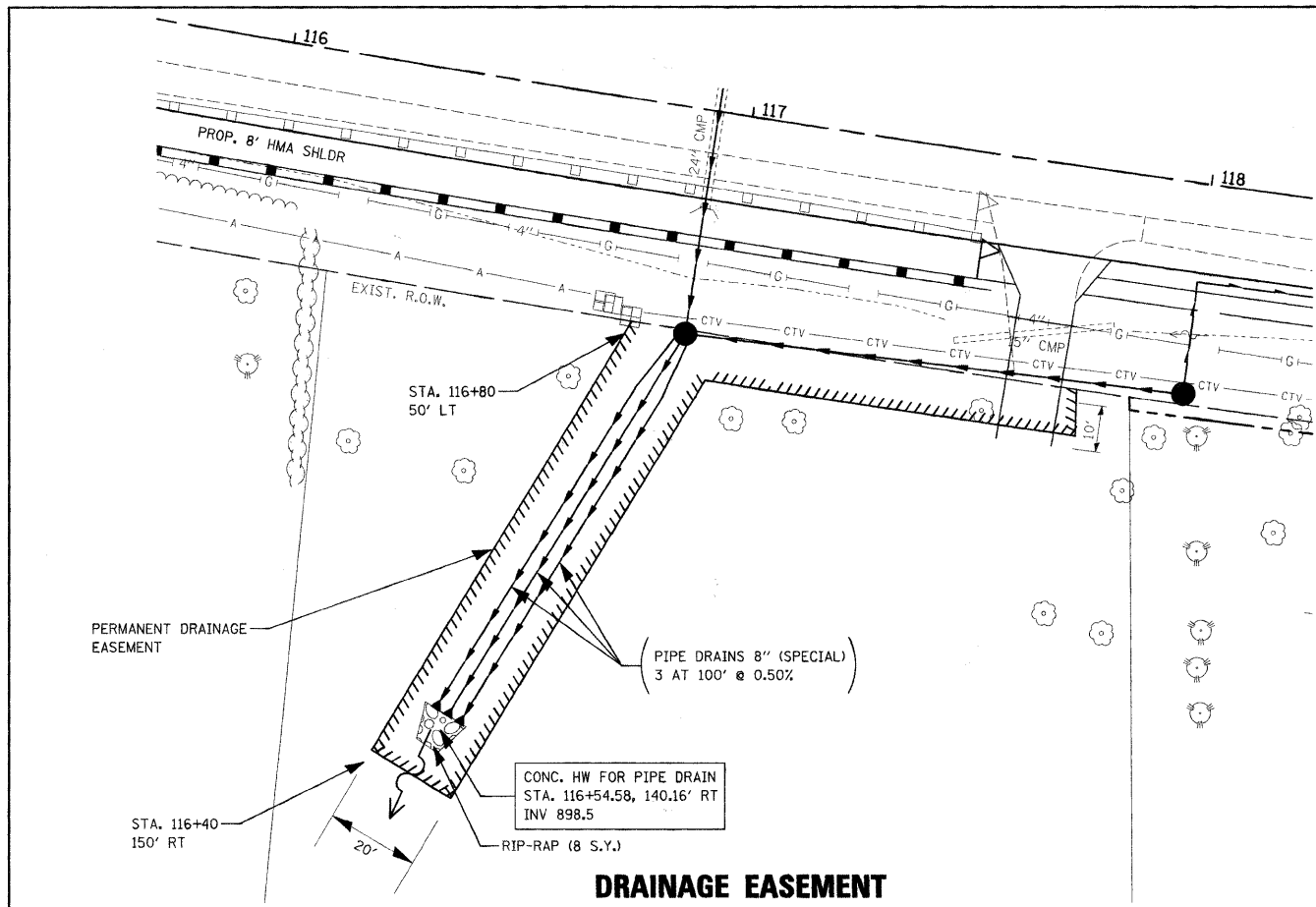


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P:\2010\100174\cad\phase 2\dwg\100174-sht-plan-brwrdn	plan-brwrdn	DRAWN -	REVISED -	<b>DEPARTMENT OF TRANSPORTATION</b>				SCALE: SHEET NO. OF SHEETS STA. TO STA.		CONTRACT NO. 63551		
PLOT SCALE = #SCALE#	PLOT DATE = 7/18/2011	CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT				



PLAN	SURVEYED	DATE
	PLOTTED	BY
	CHECKED	
	REVISIONS	
	NO. DATE	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	CHECKED	
	REVISIONS	
	NO. DATE	



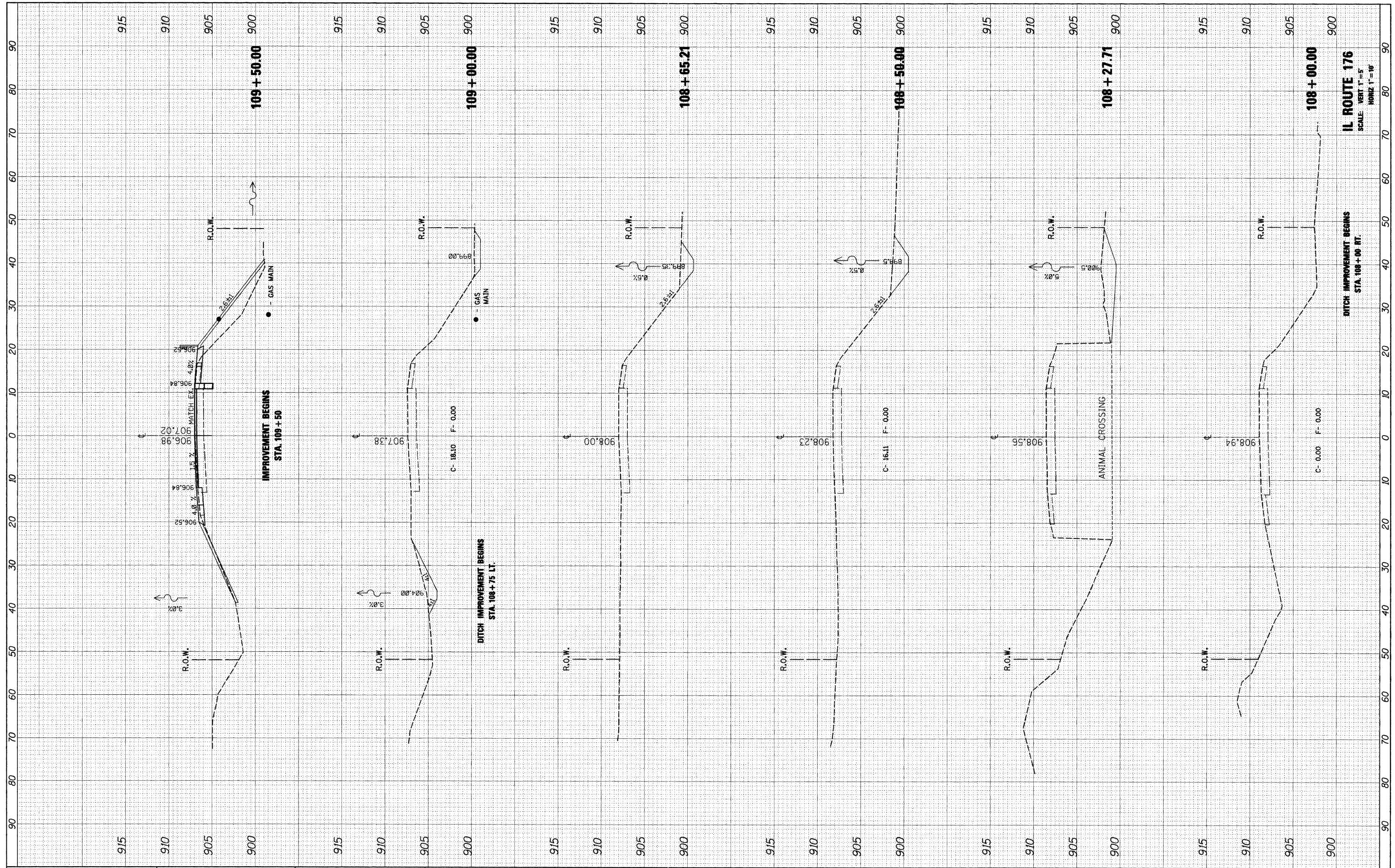
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P:\2010\100174\cad\phase 2\dwg\100174-sht-plan-Briar.dgn	PLAN=Briar.dgn	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	335	11-00114-00-CH	McHENRY	56	17
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	PLOT DATE = 7/1/2011	DATE -	REVISED -		ILLINOIS FED. AID PROJECT									

FINAL SURVEY NO.	
SUPERSEDED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY NO.	
SUPERSEDED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

BY	
DATE	

BY	
DATE	



IL ROUTE 176  
SCALE: VERT 1"=5'  
HORIZ 1"=10'

FILE NAME = P:\2010\100174\cad\phase 2\dwg\100174-sht-xshht-11176.dgn  
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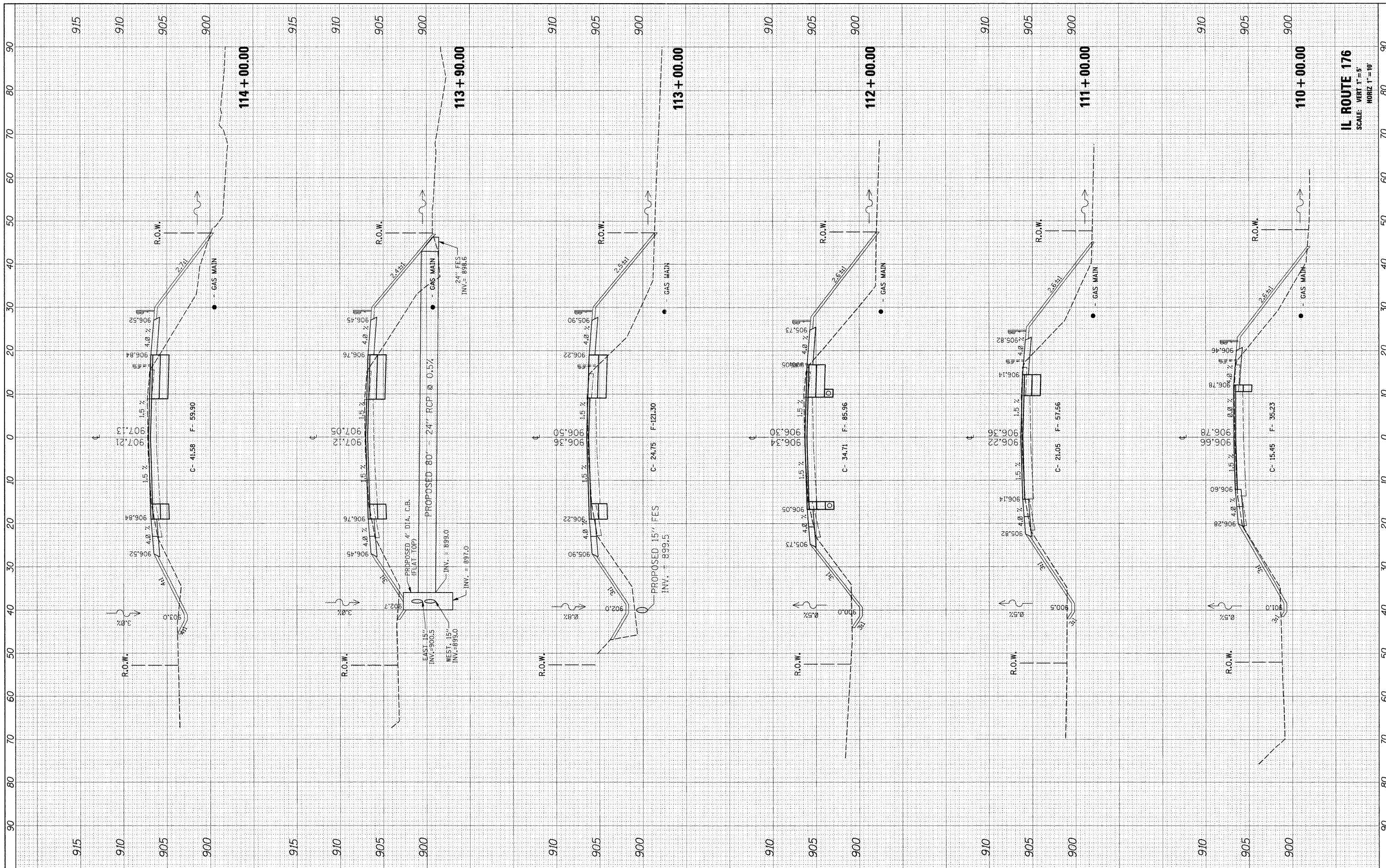
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
IL RTE. 176 @ BRIARWOOD/OHNSTAD RD.  
SCALE: SHEET NO. OF SHEETS STA. 108+00.00 TO STA. 109+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	McHENRY	56	18
CONTRACT NO. 63551			ILLINOIS FED. AID PROJECT	

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		

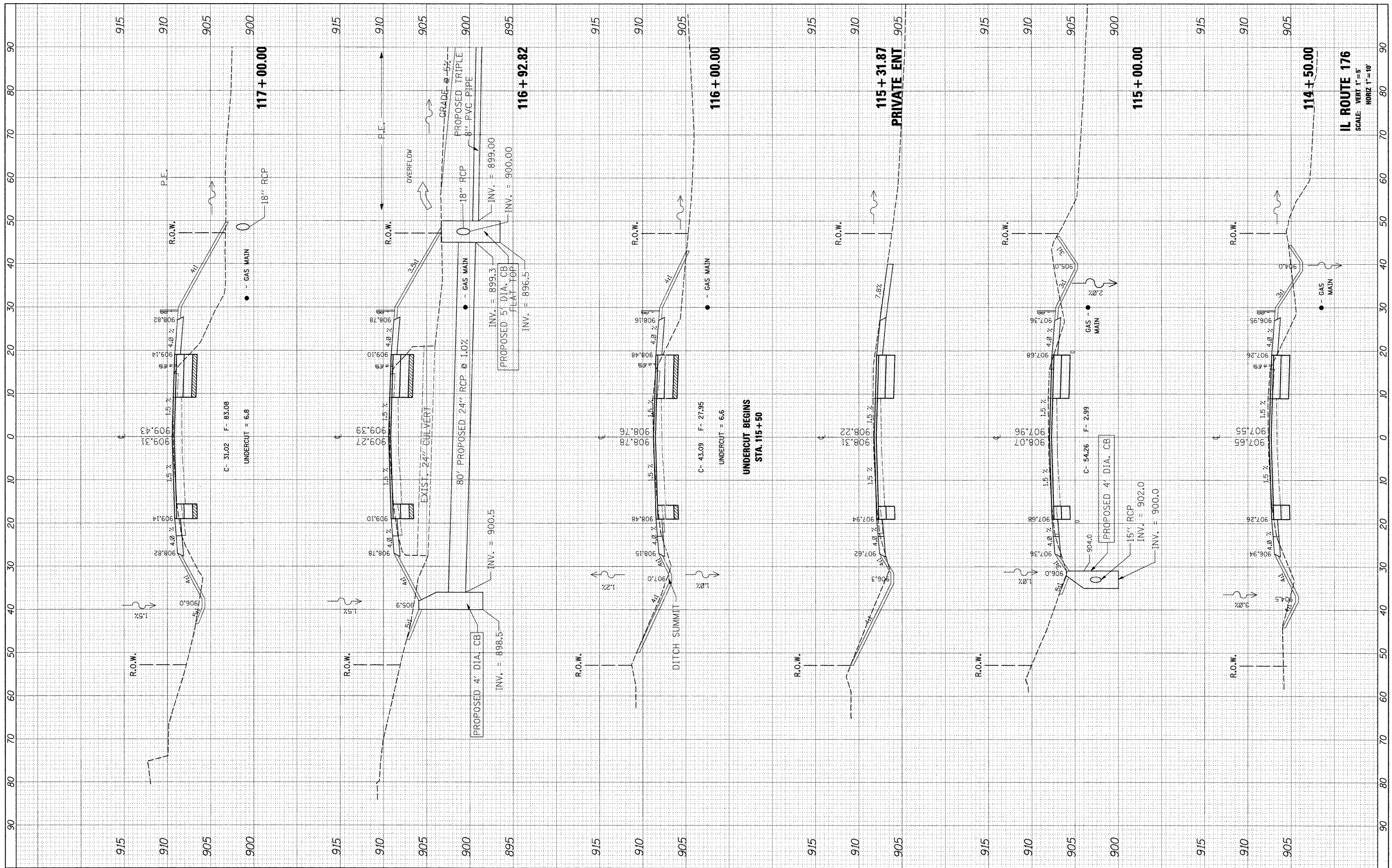


**IL ROUTE 176**  
SCALE: VERT 1"=5'  
HORIZ 1"=10'

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PLOT SCALE = #SCALE#	PLOT DATE = 7/19/2011	DRAWN -	REVISED -		<b>IL. RTE. 176 @ BRIARWOODOHNSTAD RD.</b>			335	11-00114-00-CH	McHENRY	56	19
		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 110+00.00 TO STA. 114+00.00			CONTRACT NO. 63551				
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

FINAL SURVEY	CHECKED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	CHECKED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		



**IL ROUTE 176**  
SCALE: VERT 1"=5'  
HORIZ 1"=10'

FILE NAME = P:\2010\100174\cad\phase 2\dwg\100174-shr-wsht-1176.dgn

USER NAME = #USER#  
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DATE -

PLOT SCALE = #SCALE#  
PLOT DATE = 7/18/2011

REVISED -  
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REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

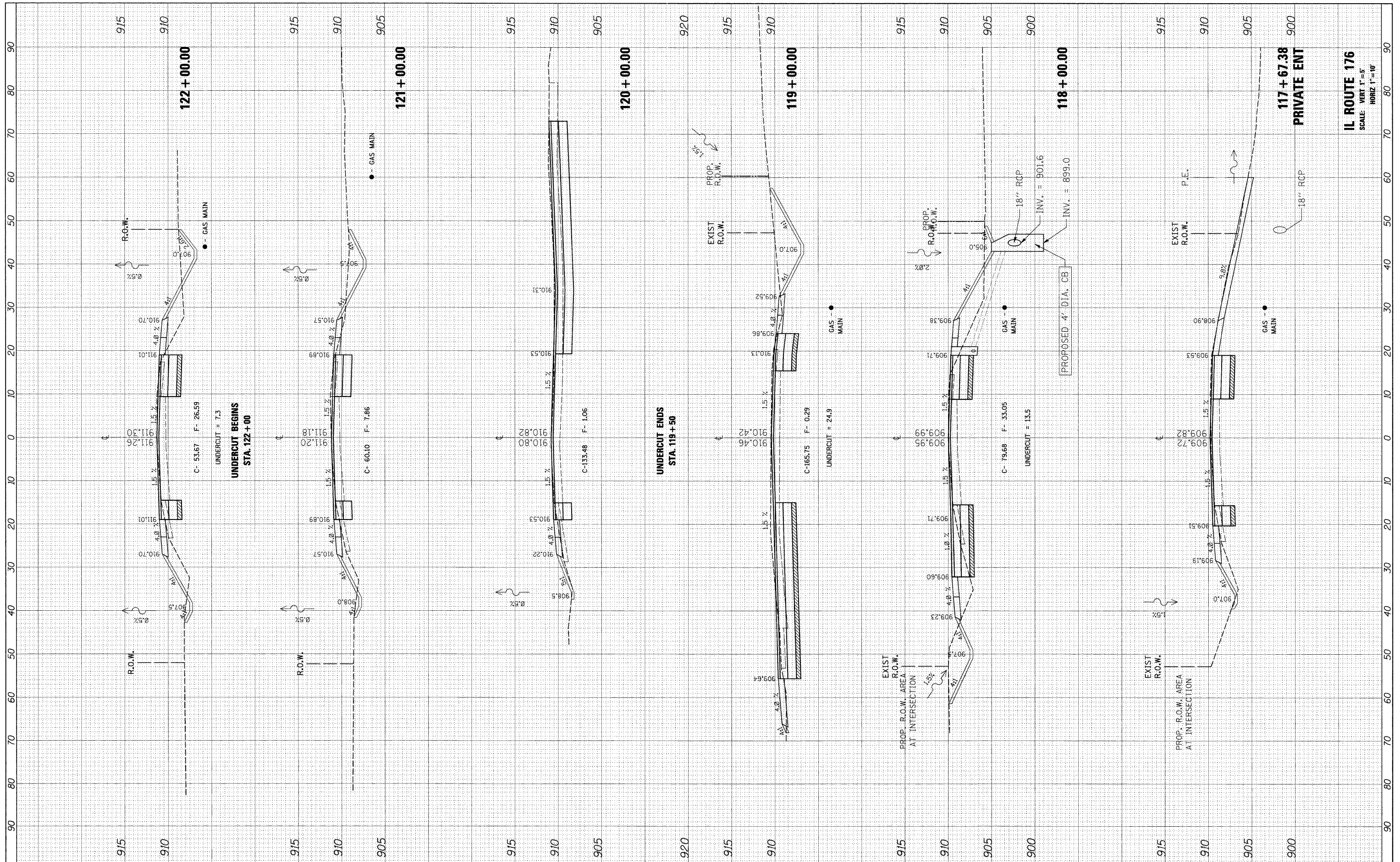
**CROSS SECTIONS**  
**IL. RTE. 176 @ BRIARWOOD/JOHNSTAD RD.**  
SCALE: SHEET NO. OF SHEETS STA. 114+50.00 TO STA. 117+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	McHENRY	56	20
CONTRACT NO. 63551				
ILLINOIS FED. AID PROJECT				



FINAL SURVEY	DATE
NO. _____	BY _____
NO. _____	DATE _____
NO. _____	BY _____
NO. _____	DATE _____
NO. _____	BY _____
NO. _____	DATE _____

ORIGINAL SURVEY	DATE
NO. _____	BY _____
NO. _____	DATE _____
NO. _____	BY _____
NO. _____	DATE _____
NO. _____	BY _____
NO. _____	DATE _____



**IL ROUTE 176**  
SCALE: VERT 1"=5'  
HORIZ 1"=10'

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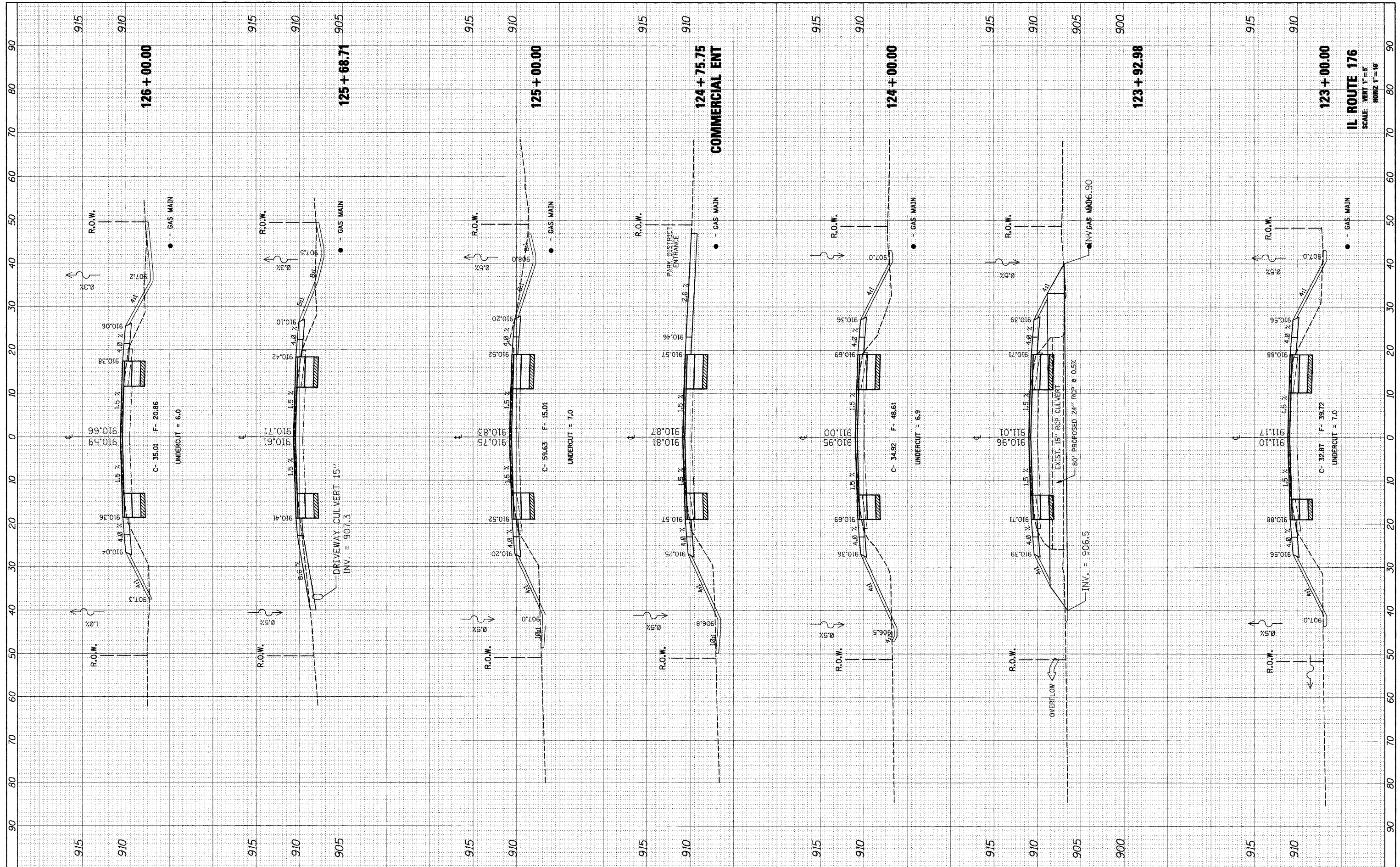
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
IL RTE. 176 @ BRIARWOOD/JOHNSTAD RD.**  
SCALE: SHEET NO. OF SHEETS STA. 117+67.38 TO STA. 122+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	McHENRY	56	21
CONTRACT NO. 63551				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SUBMITTED	DATE
NO. 1	PLOTTED	
NO. 2	TEMPLATE	
NO. 3	AREAS CHECKED	

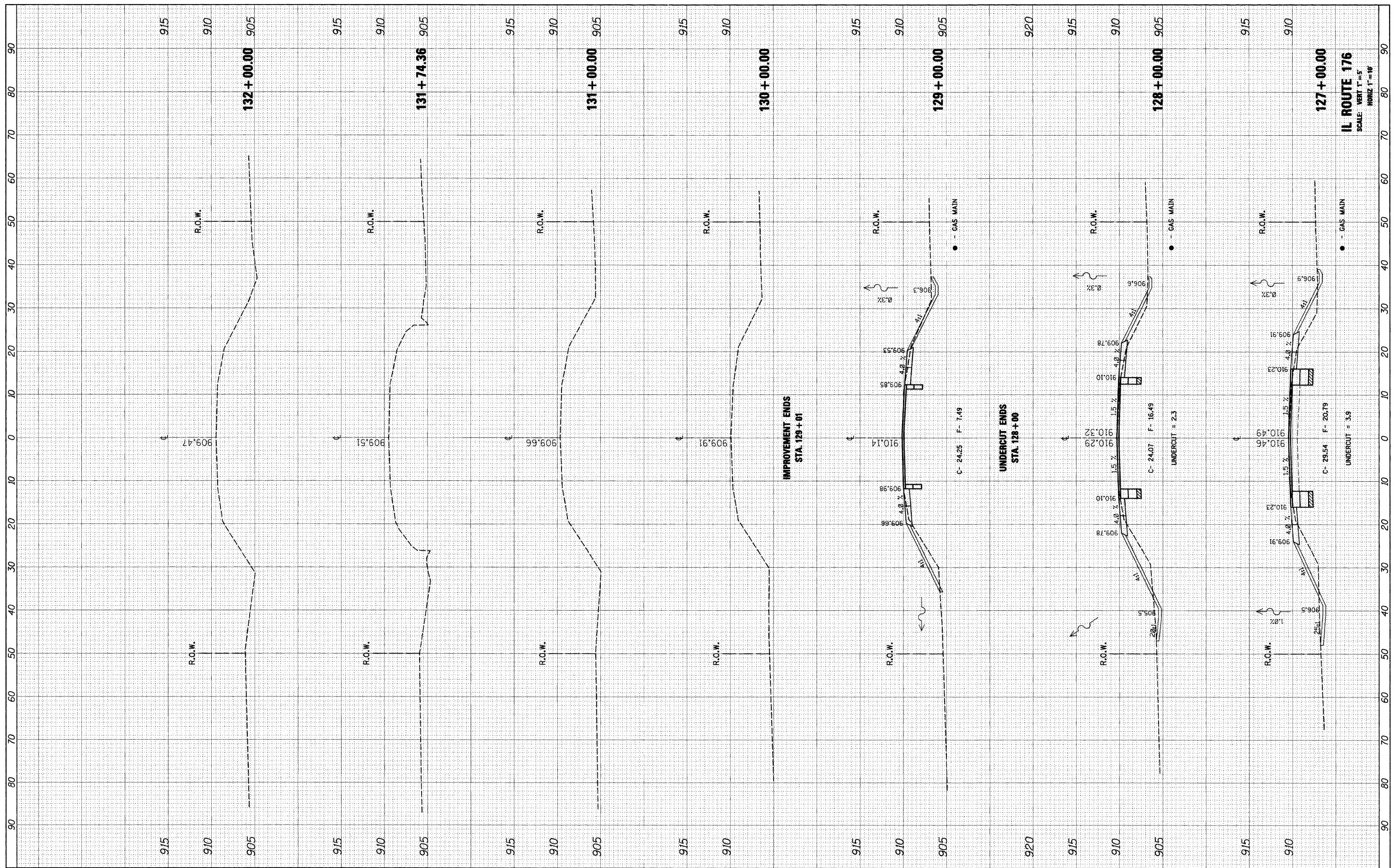
ORIGINAL SURVEY	SUBMITTED	DATE
NO. 1	PLOTTED	
NO. 2	TEMPLATE	
NO. 3	AREAS CHECKED	



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PLOT SCALE = #SCALE#	DATE = 7/1/2011	DRAWN -	REVISED -					SCALE:	SHEET NO. OF SHEETS	STA. 123+00.00 TO STA. 126+00.00	CONTRACT NO. 63551				
CHECKED -	DATE -	CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT							

FINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		



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	PLOT DATE = 7/1/2011

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CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

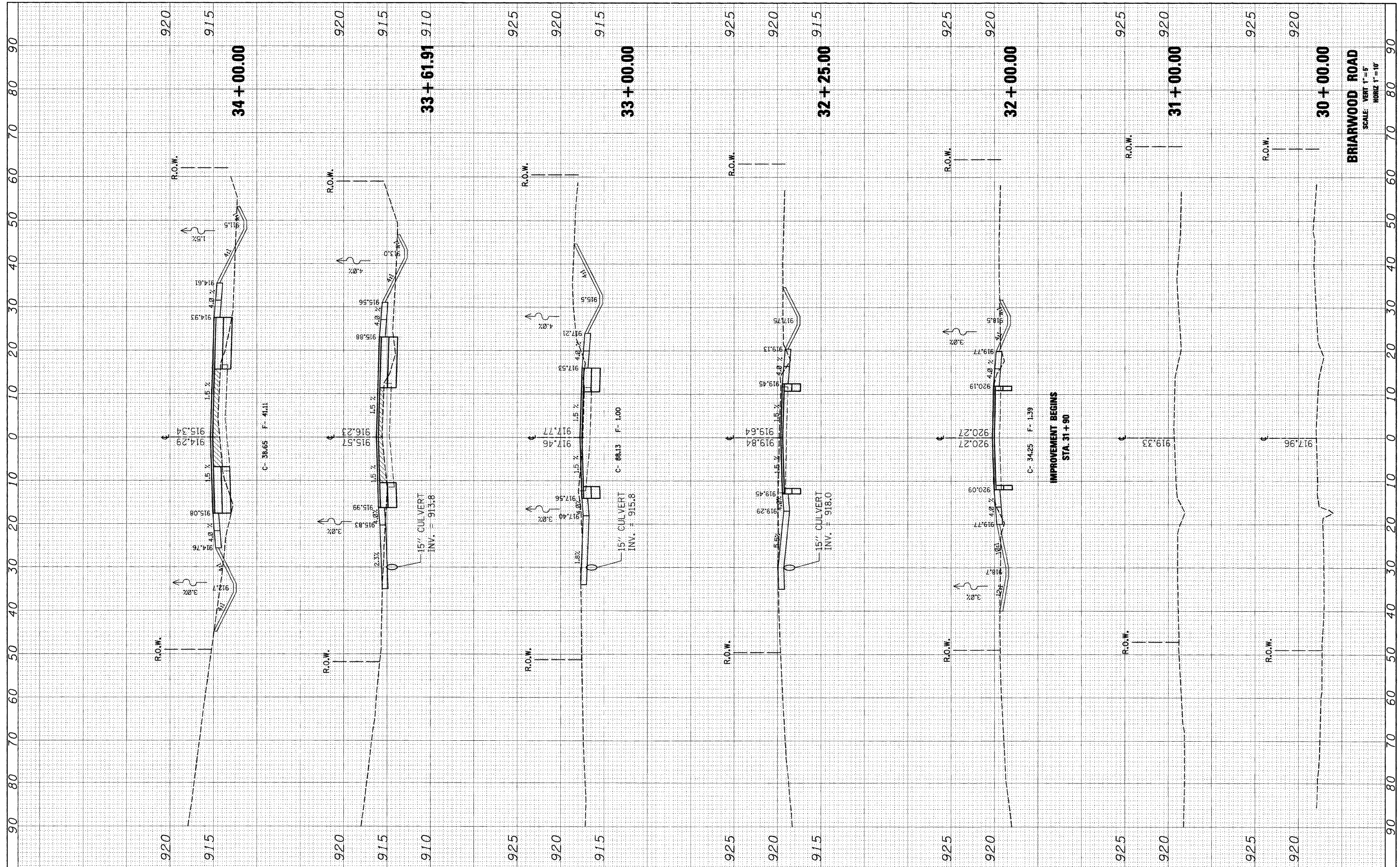
CROSS SECTIONS
IL RTE. 176 @ BRIARWOOD/JOHNSTAD RD.
SCALE: SHEET NO. OF SHEETS STA. 127+00.00 TO STA. 132+00.00

F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 23
CONTRACT NO. 63551				
ILLINOIS FED. AID PROJECT				

IL ROUTE 176	SCALE: VERT 1"=5'	HORIZ 1"=40'
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FINAL SURVEY	EXPANDED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS	
	CHECKED	

ORIGINAL SURVEY	DATE
NOTE BOOK	
NO.	



**BRIARWOOD ROAD**  
SCALE: VERT 1" = 5'  
HORIZ 1" = 10'

FILE NAME =	P:\2010\100174\oad\phase 2\dwg\100174-sht-kssht
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PLOT DATE = 7/1/2011	

DESIGNED -	REVISED -
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CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

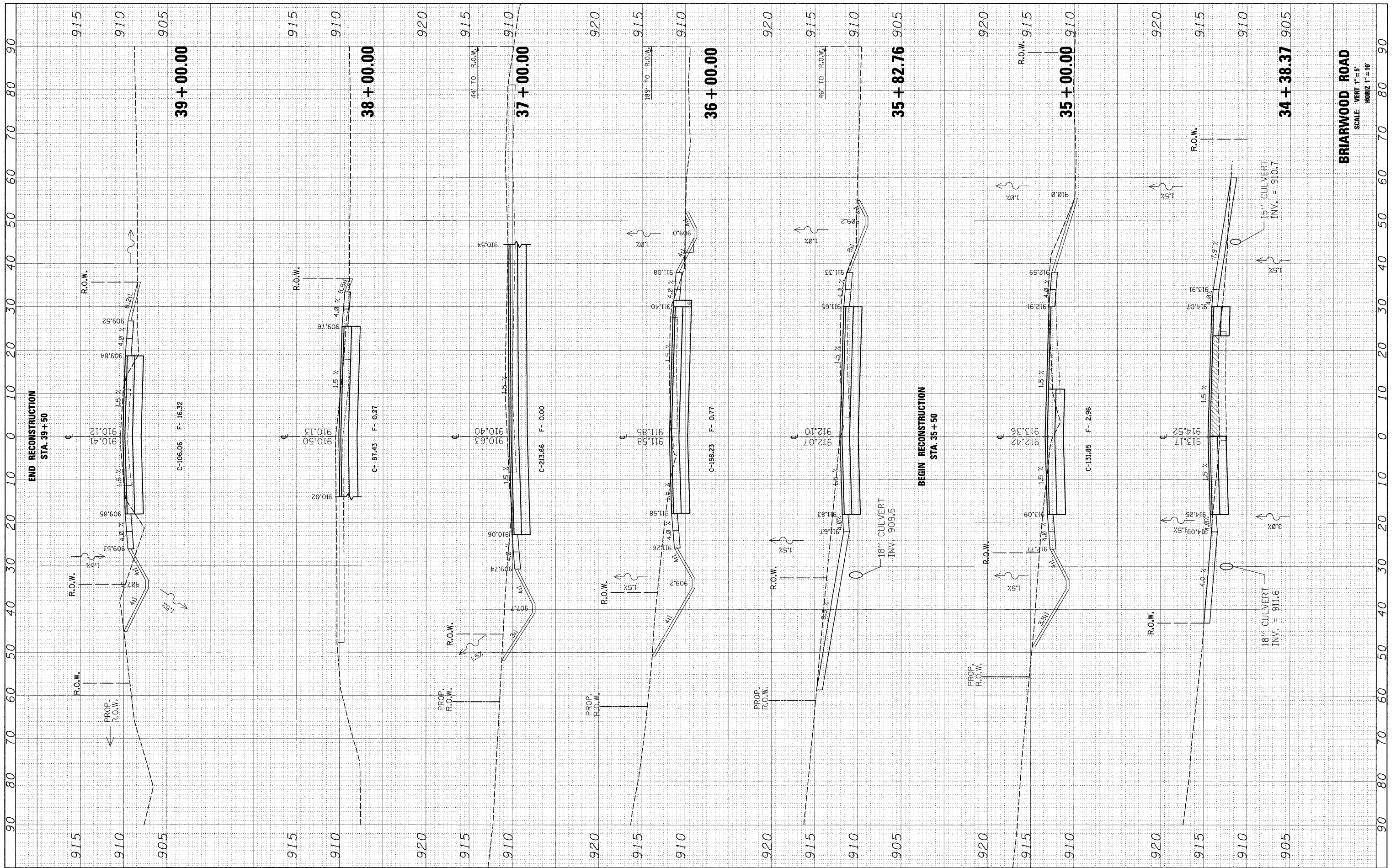
SCALE:	SHEET NO.	OF	SHEETS	STA. 30+00.00	TO STA. 34+00.00
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**CROSS SECTIONS  
IL. RTE. 176 @ BRIARWOOD /OHNSTAD RD.**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	McHENRY	56	24
				CONTRACT NO. 63551
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	REVISIONS	DATE
NO. _____	BY _____	_____
NO. _____	BY _____	_____
NO. _____	BY _____	_____
NO. _____	BY _____	_____
NO. _____	BY _____	_____

ORIGINAL SURVEY	REVISIONS	DATE
NO. _____	BY _____	_____
NO. _____	BY _____	_____
NO. _____	BY _____	_____
NO. _____	BY _____	_____
NO. _____	BY _____	_____

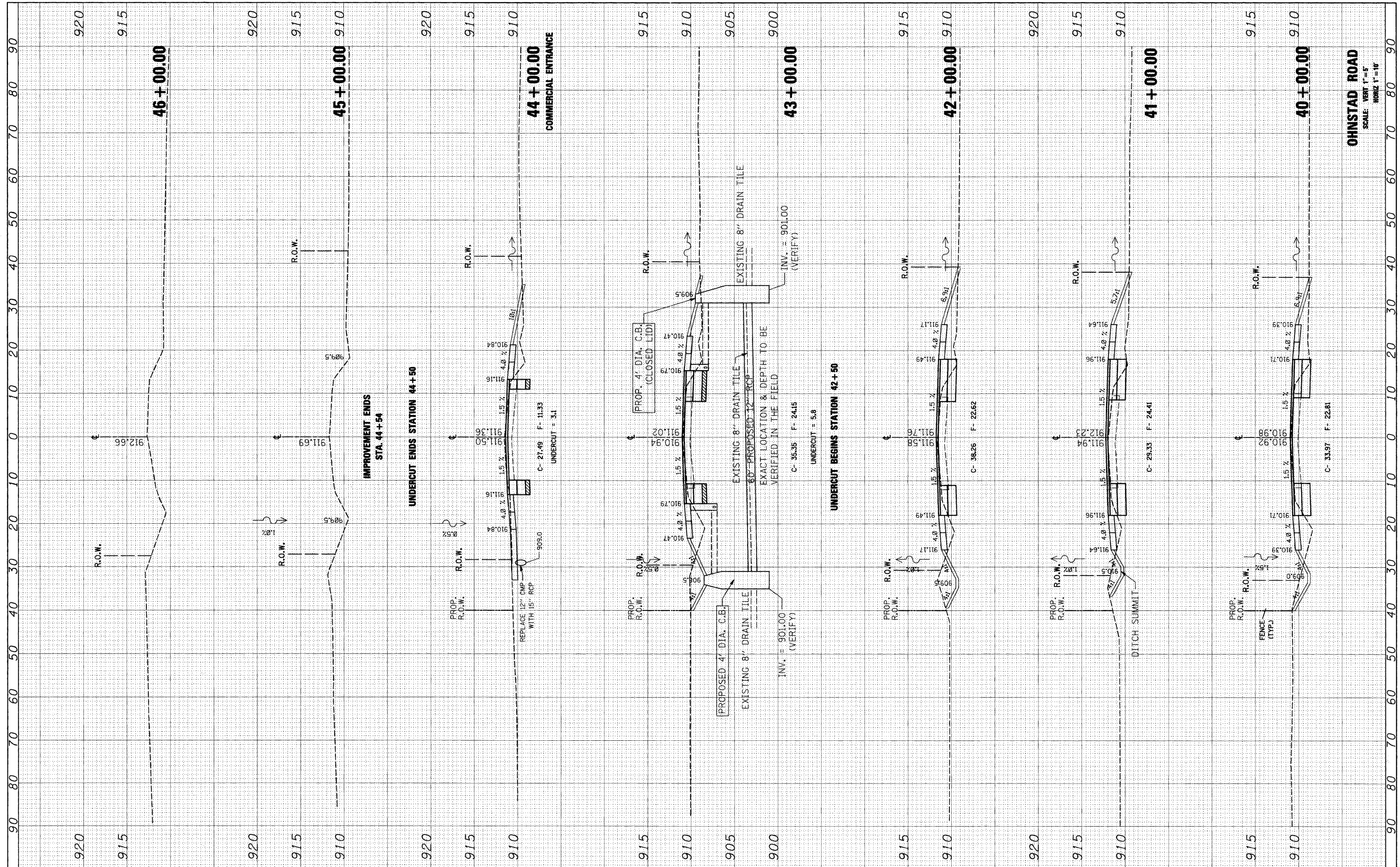


**BRIARWOOD ROAD**  
SCALE: VERT 1"=5'  
HORIZ 1"=10'

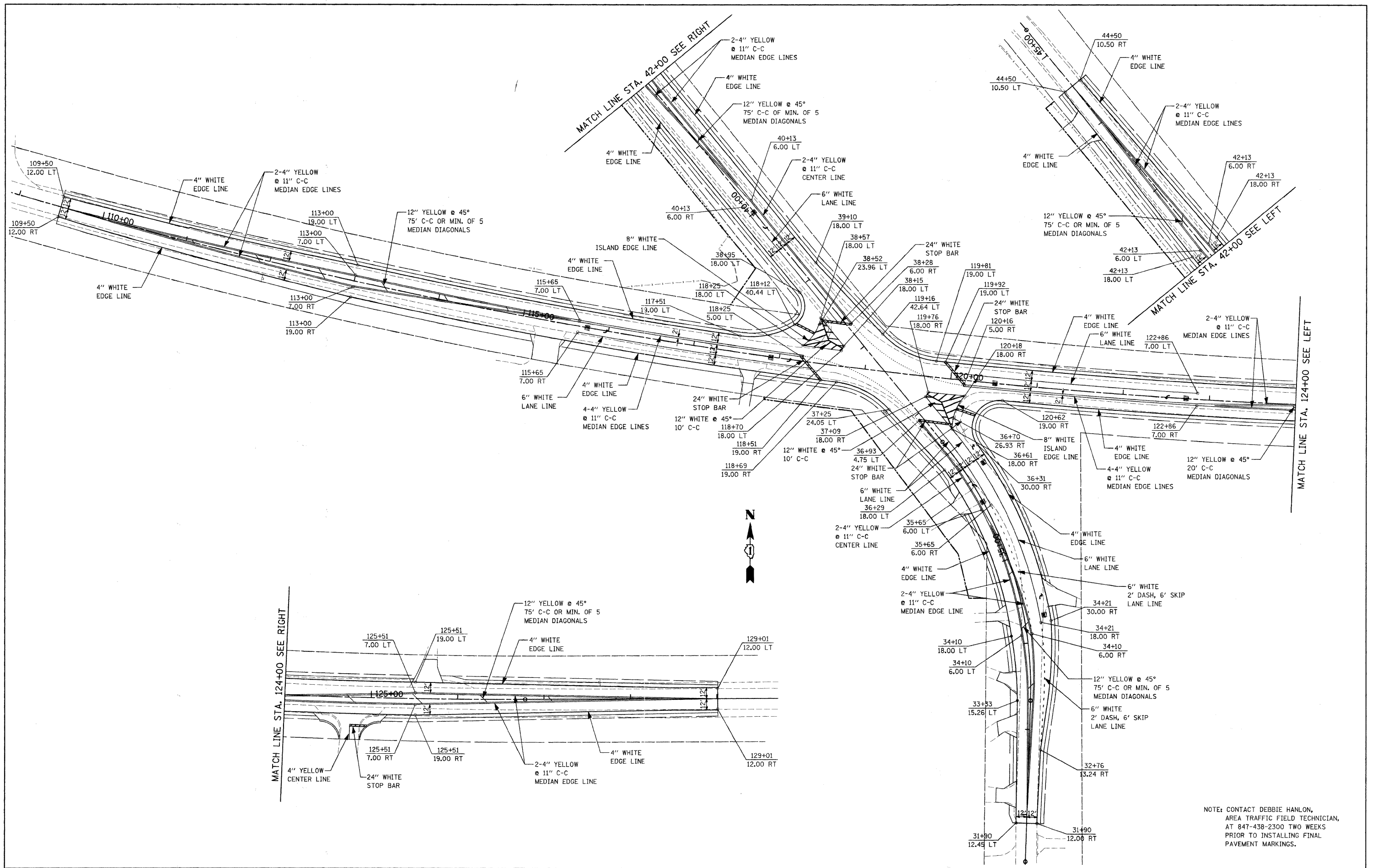
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PLOT SCALE = #SCALE#	DRAWN -	REVISED -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. 34+38.37	TO STA. 39+00.00	CONTRACT NO. 63551		
PLOT DATE = 7/19/2011	CHECKED -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT						
	DATE -	REVISED -	REVISED -									

FINAL SURVEY NO.	DATE
DESIGNED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY NO.	DATE
DESIGNED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

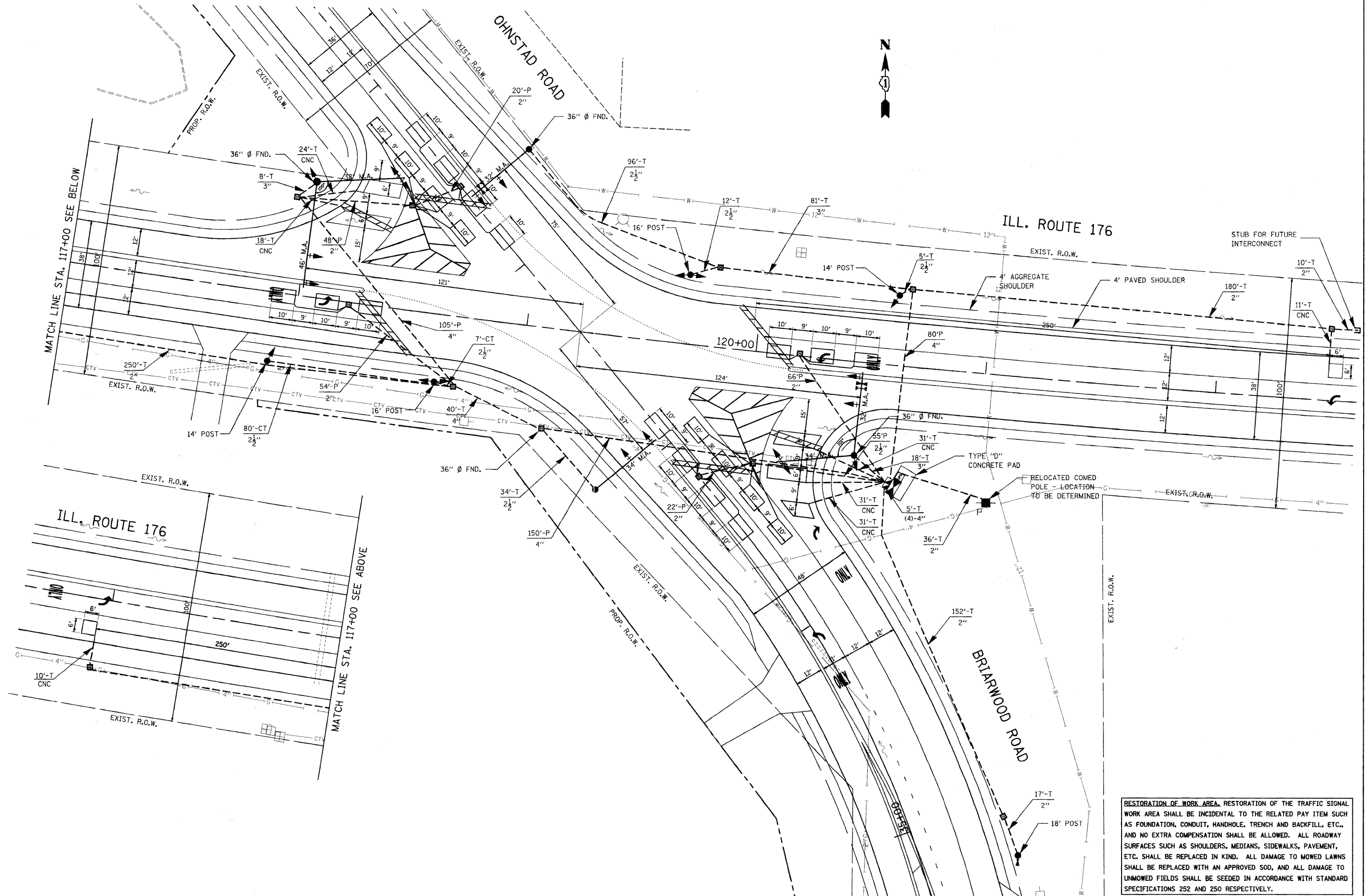


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PLOT SCALE = #SCALE#	PLOT DATE = 7/1/2011	DRAWN -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. 40+00.00 TO STA. 46+00.00	CONTRACT NO. 63551				
CHECKED -		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
DATE -		DATE -	REVISED -									



NOTE: CONTACT DEBBIE HANLON, AREA TRAFFIC FIELD TECHNICIAN, AT 847-438-2300 TWO WEEKS PRIOR TO INSTALLING FINAL PAVEMENT MARKINGS.

FILE NAME = P:\2010\100174\cad\phase 2\dwg\100174-sh-pvmark.dgn	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING PLAN IL ROUTE 176 AND BRIARWOOD RD.</b>			F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 27
	PLOT SCALE = #SCALE#	DRAWN -	REVISED -		SCALE: 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 63551		
	PLOT DATE = 7/1/2011	CHECKED -	REVISED -							ILLINOIS FED. AID PROJECT		
		DATE -	REVISED -									



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
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PLOT DATE = 7/1/2011		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>TRAFFIC SIGNAL INSTALLATION ILL ROUTE 176 AND BRIARWOOD RD.</b>			
SCALE: 1"=20'	SHEET NO.	OF SHEETS	STA. TO STA.

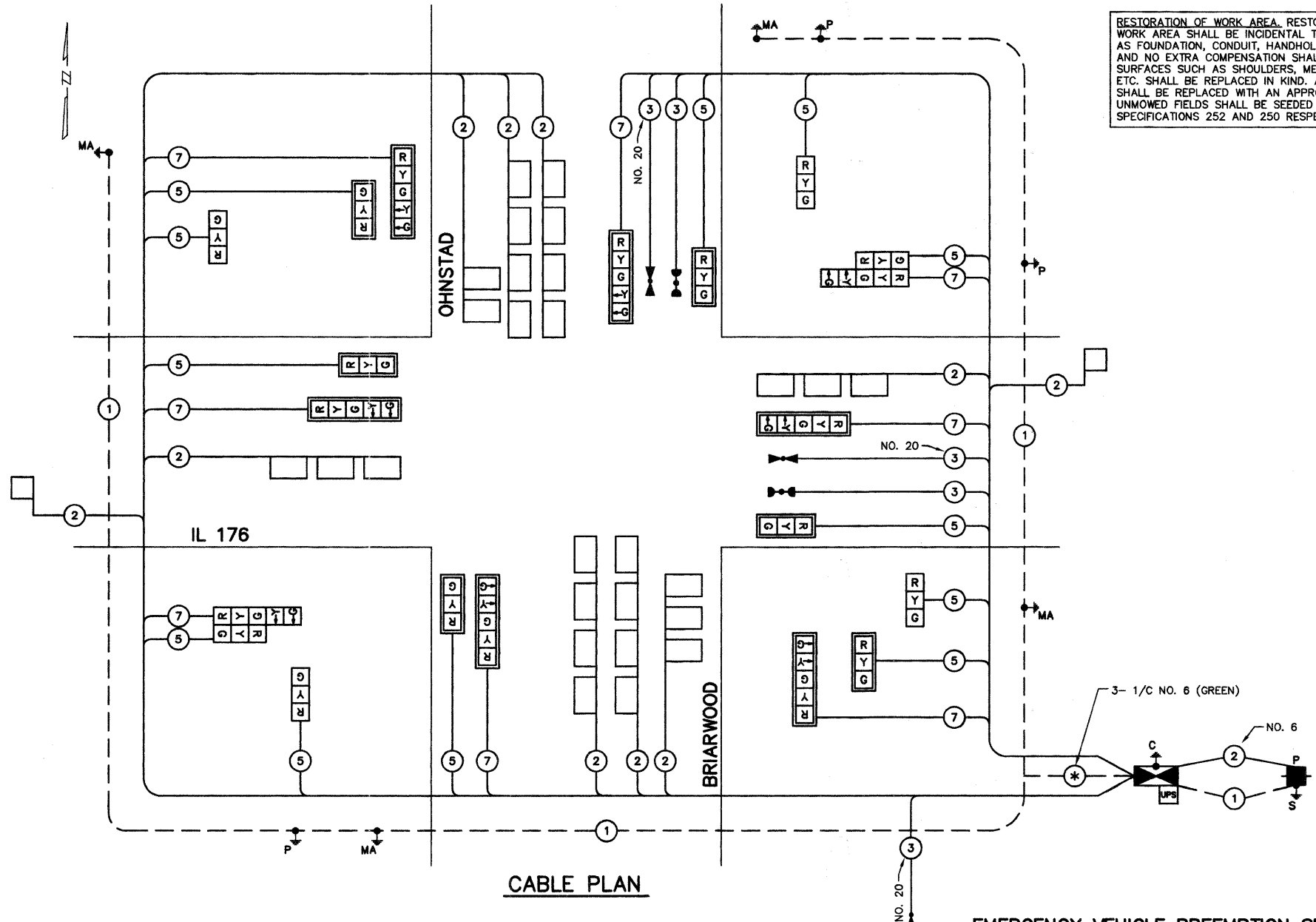
F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 28
CONTRACT NO. 63551				
ILLINOIS FED. AID PROJECT				



**SCHEDULE OF QUANTITIES**

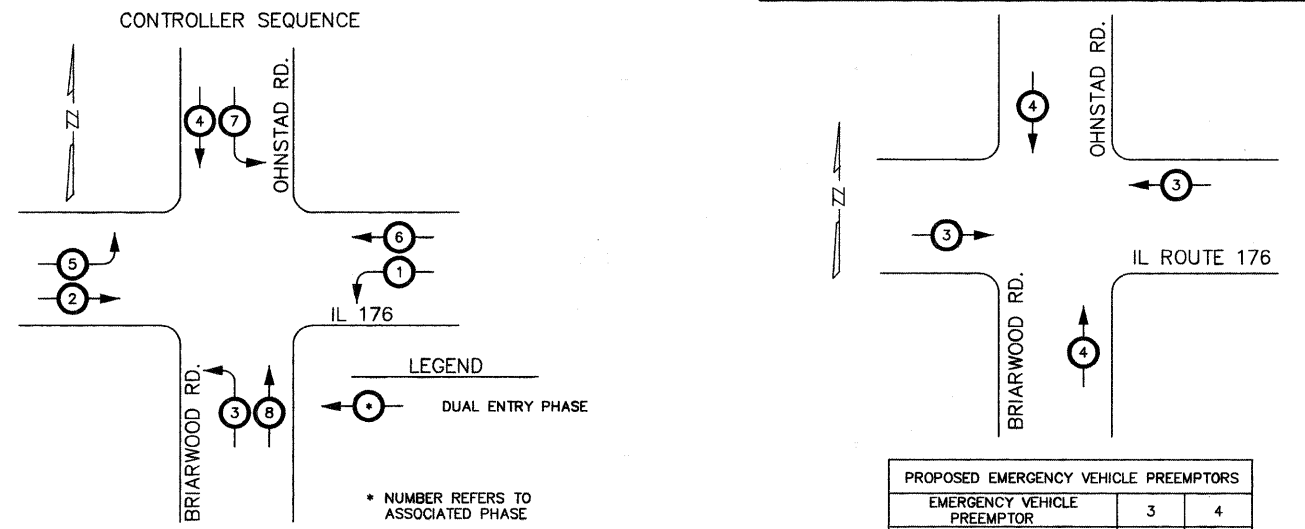
ITEM DESCRIPTION	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	33
SIGN PANEL - TYPE 2	SQ FT	20
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	651
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	252
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	113
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	60
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	210
CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	55
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	335
HEAVY-DUTY HANDHOLE	EACH	14
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	855
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	431
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2830
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2073
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2386
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	61
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1005
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 38 FT. AND 46 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	20
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	50
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	12
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE I	FOOT	1300
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE EXISTING HANDHOLE	EACH	2
CHANGEABLE MESSAGE SIGN, SPECIAL	CAL DAY	60
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	648
MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION, SPECIAL	LSUM	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 34 FT. AND 32 FT.	EACH	1

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOG, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



**CABLE PLAN**

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**PHASE DESIGNATION DIAGRAM**

PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	↔ ↑↓

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	x WATTAGE			
		INCAND.	LED	% OPERATION	
SIGNAL (RED)	20	436	17	0.50	170
(YELLOW)	20	436	25	0.25	125
(GREEN)	20	436	15	0.25	75
ARROW	16	436	12	0.10	19.2
CONTROLLER	1	100	100	1.00	100.0
FLASHER				0.50	
LOOPS	10	5		1.00	50
TOTAL =					539.2

FOUNDATION (DEPTH)	FT.	CABLE SLACK	FT.	VERTICAL CABLE	FT.
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3
D - D-CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20'+L-2
E - M. ARM POLE		SIGNAL POST	2	BRACKET MOUNTED	13
< 30' MA 30" DIA	10	CONTROLLER CAB.	1	PED. PUSHBUTTON	6
< 40' MA 30" DIA	13.5	FIBER OPTIC	13	ELECTRIC SERVICE	13.5
< 40' MA 36" DIA	11	ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
< 50' MA 36" DIA	13	GROUND CABLE	1	POST MOUNTED	6
> 50' MA 36" DIA	15				

ENERGY COSTS TO: 50% IDOT, 50% Crystal Lake. TOTAL = 539.2

ENERGY SUPPLY CONTACT: Mr. Mike Lennox, 815-490-2869, ComEd

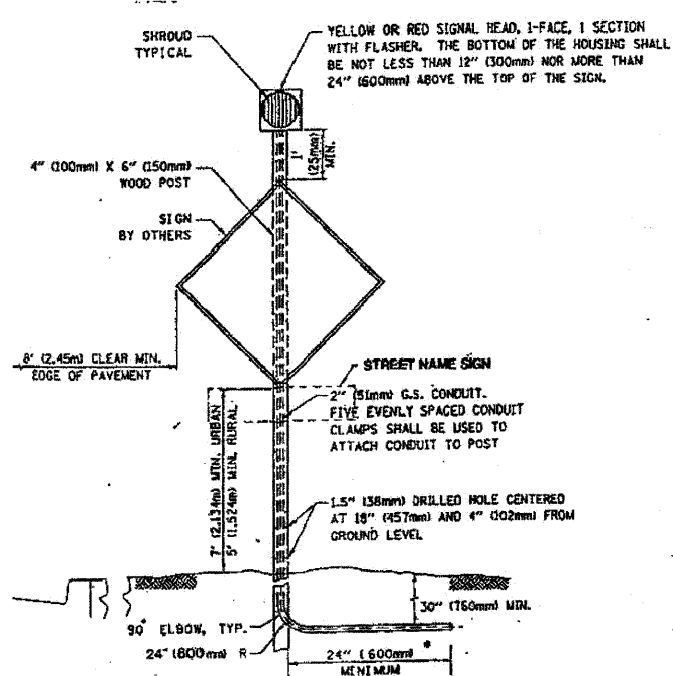


**EMC - SUMMARY OF QUANTITIES**

ITEM	DESCRIPTION	UNIT	QUANTITY
GC12	CONDUIT, GALVANIZED STEEL, IN GROUND, 3/4 TO 2 1/2 INCH	FEET	550
GE12	ELECTRIC SERVICE DISCONNECT, 2 OR 3 WIRE, MOUNTED ON WOOD POLE	EACH	-
GH03	HANDHOLE HEAVY DUTY	EACH	2
TE02	ELECTRIC CABLE NO. 14 3/C	FEET	622
TE05	GROUND CABLE NO. 6 1/C	FEET	55
TFB1	FLASHING BEACON, POST MOUNTED	EACH	4

**FLASHER SIGNAL LEGEND**

	PROPOSED	EXISTING
SERVICE INSTALLATION	◆	□
12" SIGNAL HEAD (LED)	▶	▽
WOOD POST, 4" x 6"	⊠	⊠ "E"
CONDUIT IN GROUND OR UNIT DUCT IN TRENCH	---	---
HANDHOLE	▣	▣
HEAVY-DUTY HANDHOLE	⊞	⊞ "E"
ELECTRICAL POLE	●	○
GROUND ROD	⊕	⊕
SIGNAL FACE WITH BACKPLATE	⊞	⊞
W2-1 OR W2-2 WARNING SIGN W/ STREET PANEL	⊞	⊞

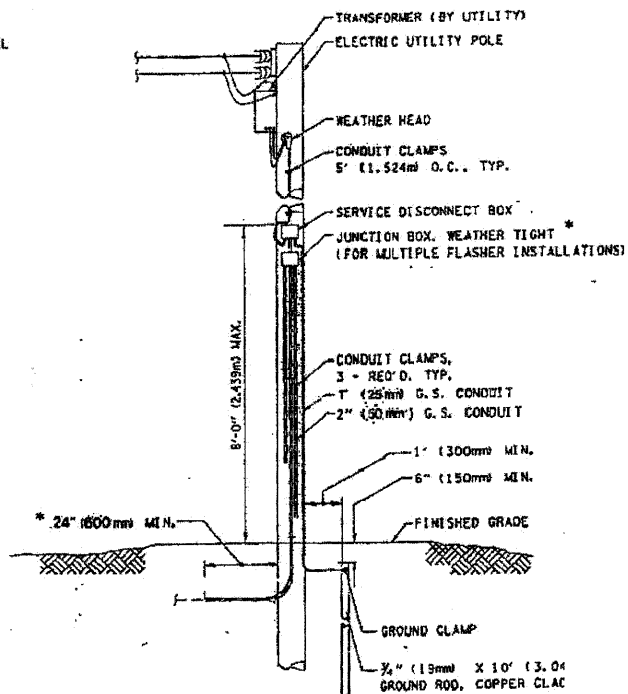


**RED /YELLOW POST MOUNTED FLASHER DETAIL**

EXISTING

**NOTE FOR FLASHER(S):**

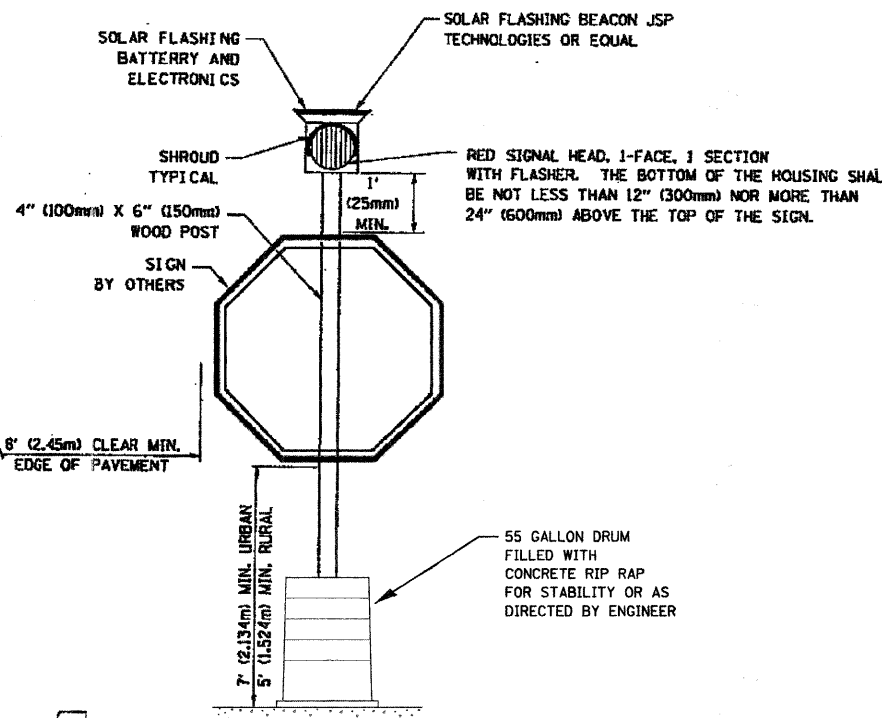
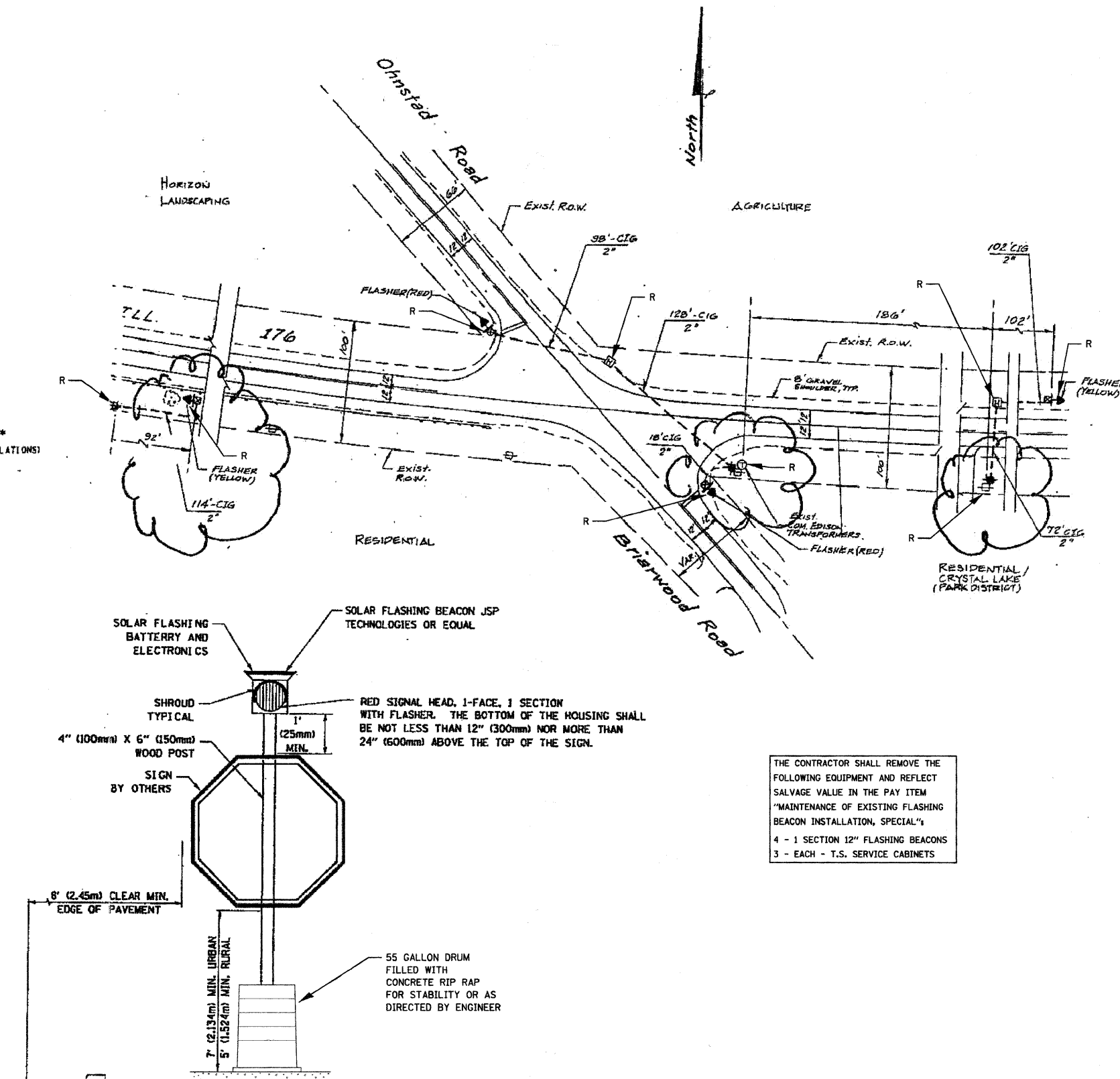
PRIOR TO INITIATING OPERATION OF ANY FLASHER LOCATION, IT SHALL BE THE RESPONSIBILITY OF THE "ELECTRICAL MAINTENANCE CONTRACTOR" TO CONTACT, 48 HRS IN ADVANCE, THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATION ENGINEER" AT (847) 705-4139, ILLINOIS DEPARTMENT OF TRANSPORTATION.



**POLE MOUNTED SERVICE DISTRIBUTION DETAIL (3-SERVICE LINES)**

\* F APPLICABLE

EXISTING



**DRUM MOUNTED SOLAR FLASHER DETAIL**

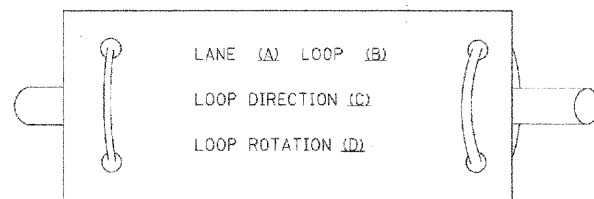
TEMPORARY

THE CONTRACTOR SHALL REMOVE THE FOLLOWING EQUIPMENT AND REFLECT SALVAGE VALUE IN THE PAY ITEM "MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION, SPECIAL'S"  
 4 - 1 SECTION 12" FLASHING BEACONS  
 3 - EACH - T.S. SERVICE CABINETS

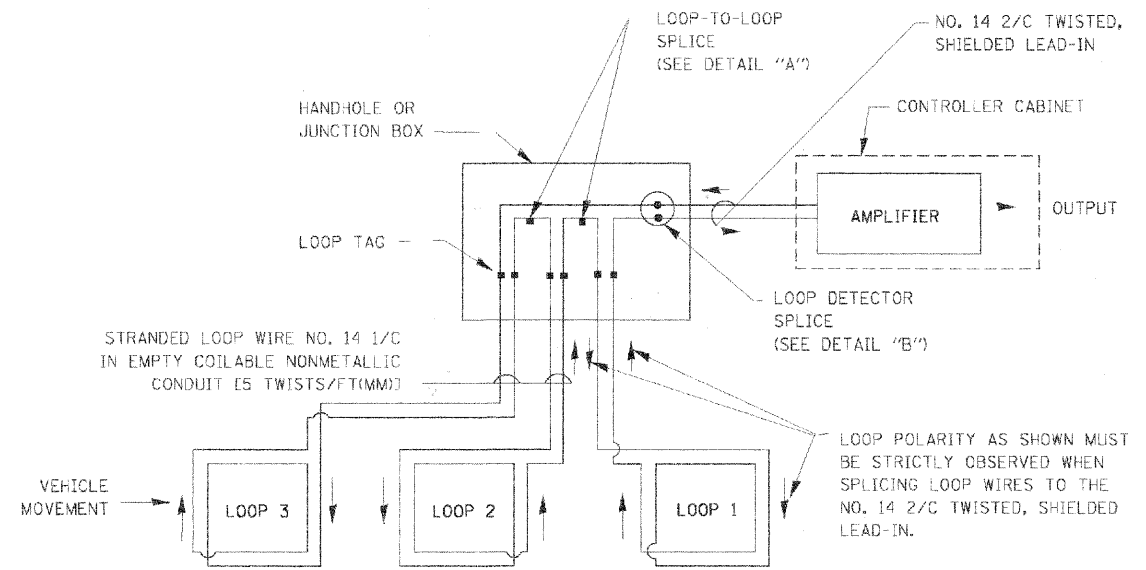
**LOOP DETECTOR NOTES**

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

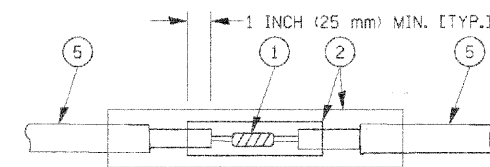


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

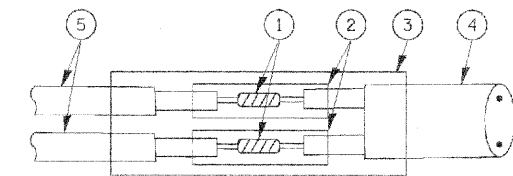


**DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

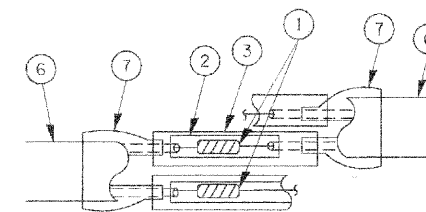


**DETAIL "A"  
LOOP-TO-LOOP SPLICE**

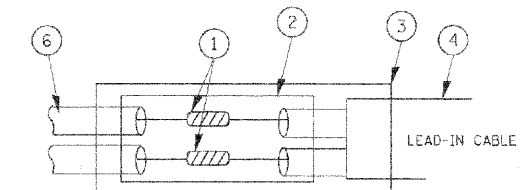


**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**TYPE I LOOP**



**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



**PREFORMED LOOP**

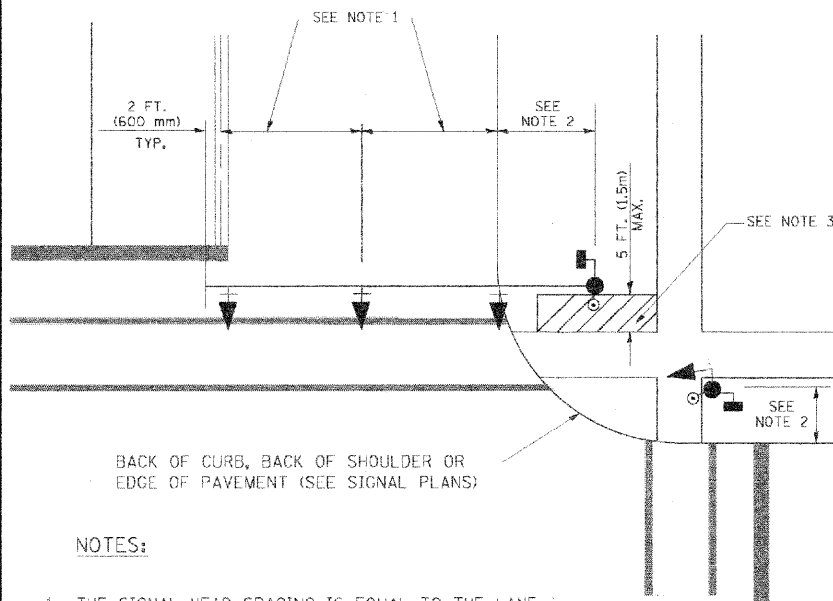
**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**LOOP DETECTOR SPLICE**

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- PREFORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL.

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

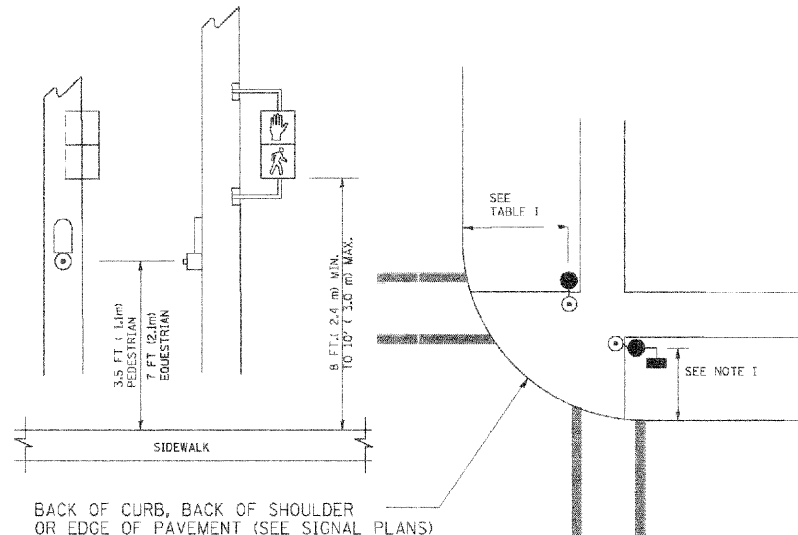
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

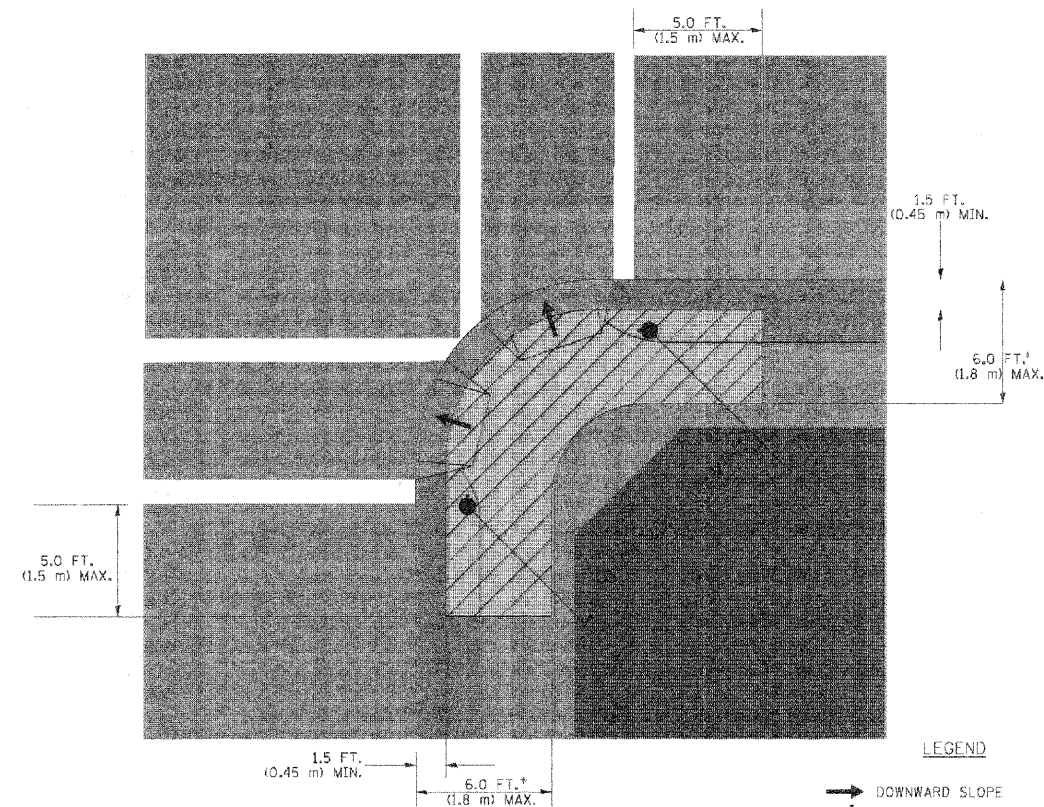
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

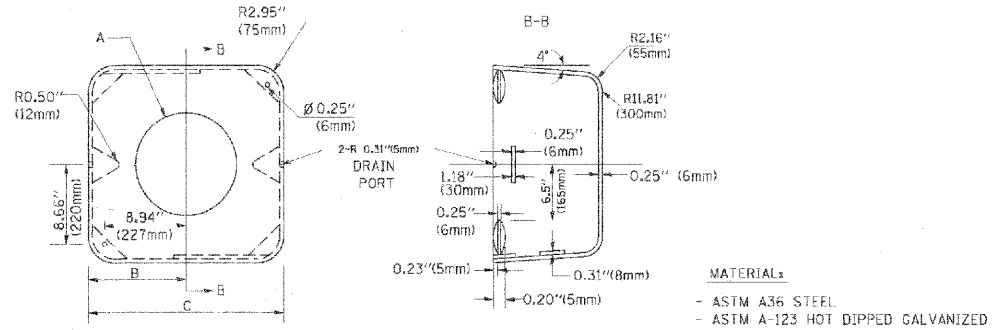
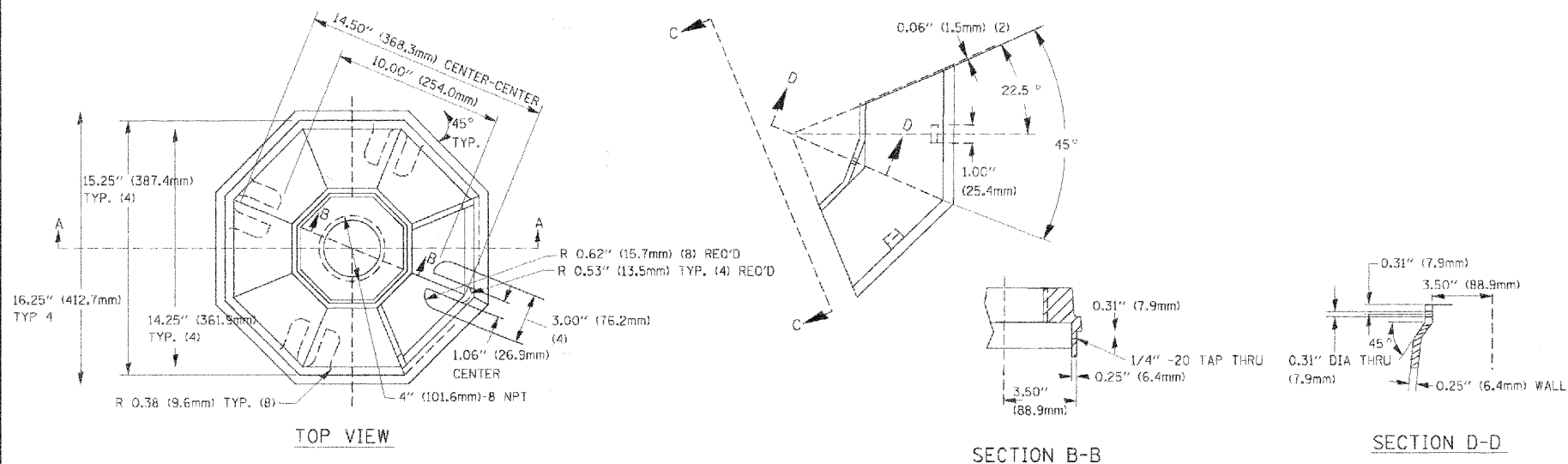
**TRAFFIC SIGNAL EQUIPMENT OFFSET**

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

**NOTES:**

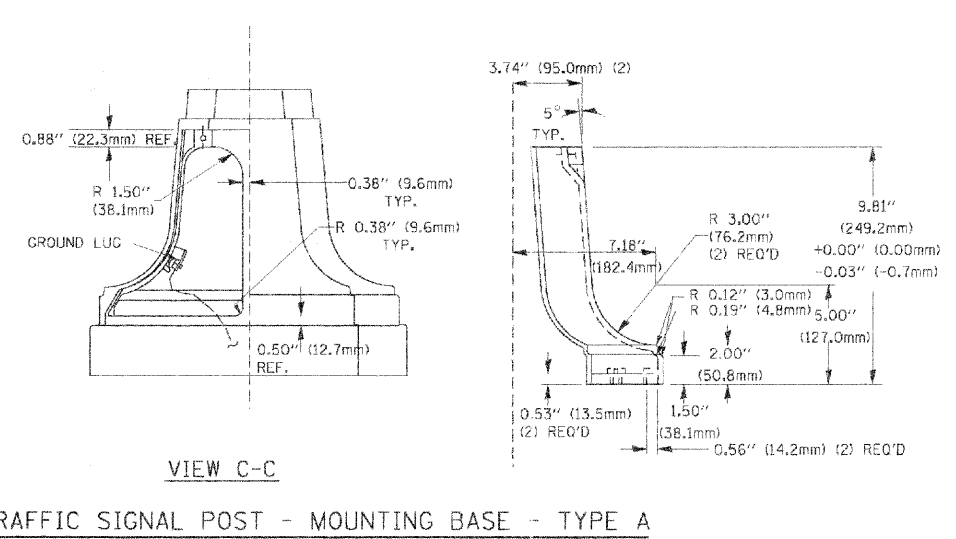
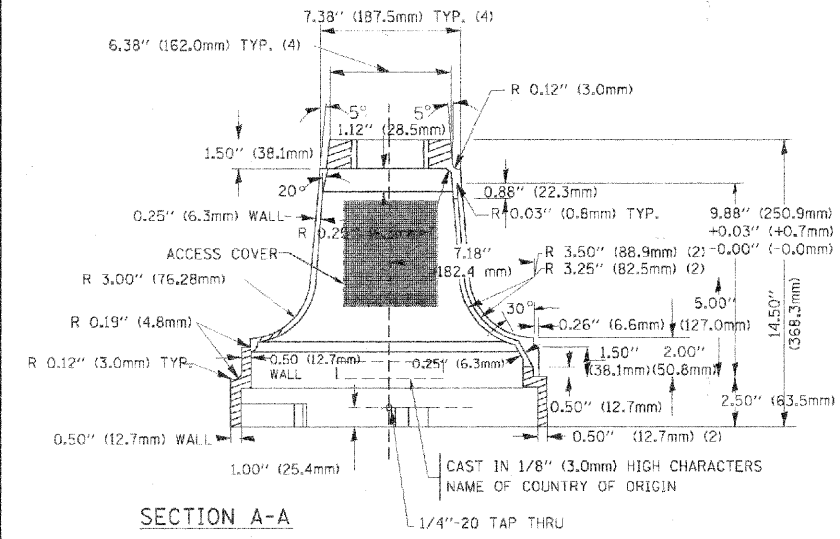
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD AFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.



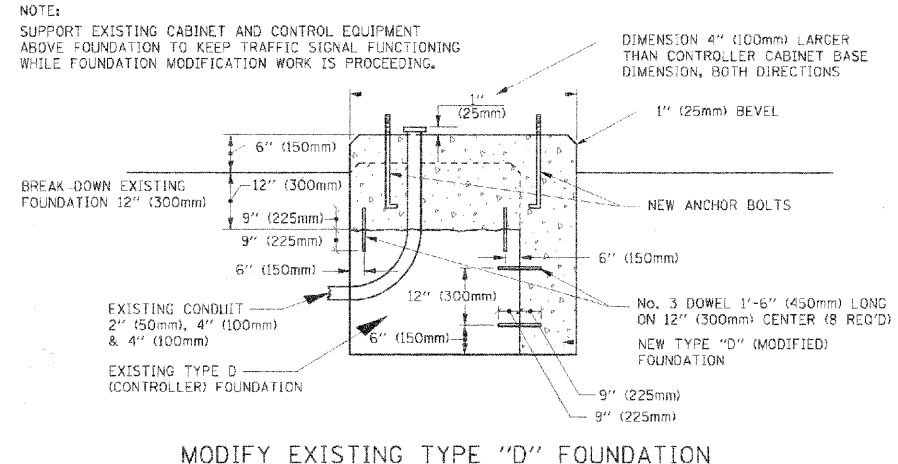


	A	B	C	HEIGHT	WEIGHT
VARIABLES	VARIES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIABLES	VARIES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIABLES	VARIES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIABLES	VARIES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)	126 lbs (57 kg)

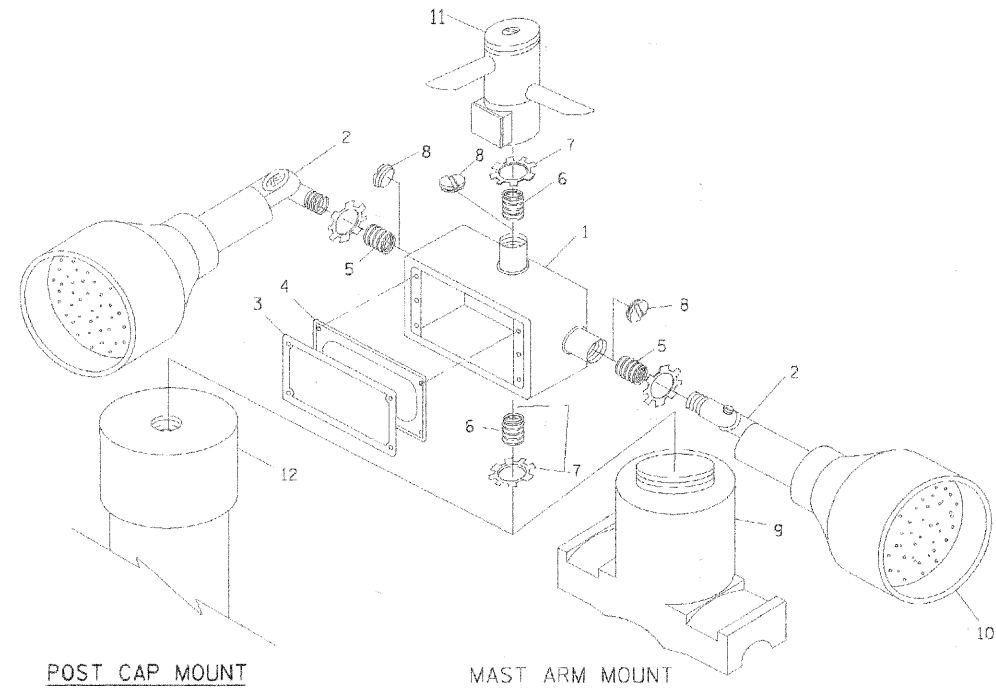
- NOTES:**
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
  - THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
  - THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

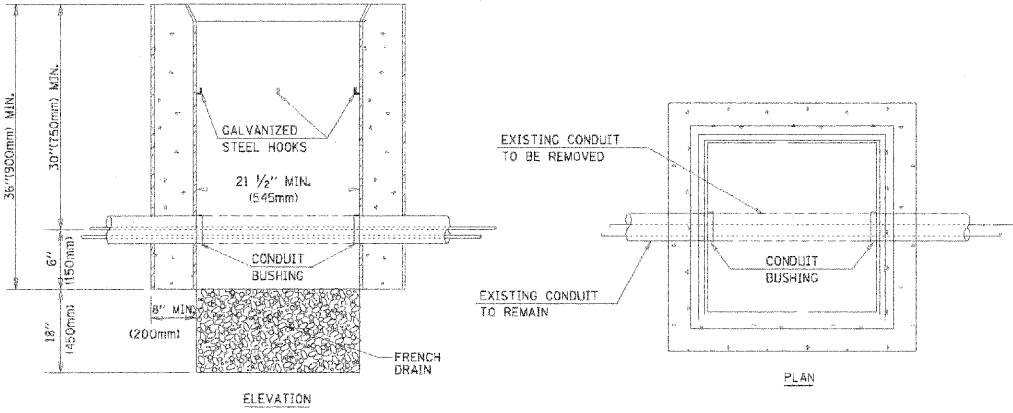


MODIFY EXISTING TYPE "D" FOUNDATION



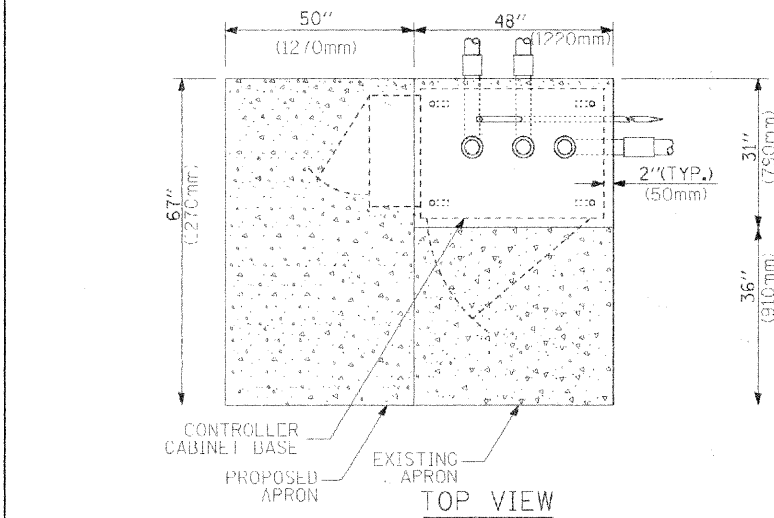
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. 10.000344 CU-IN
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

- NOTES:**
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
  - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
  - WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4\"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

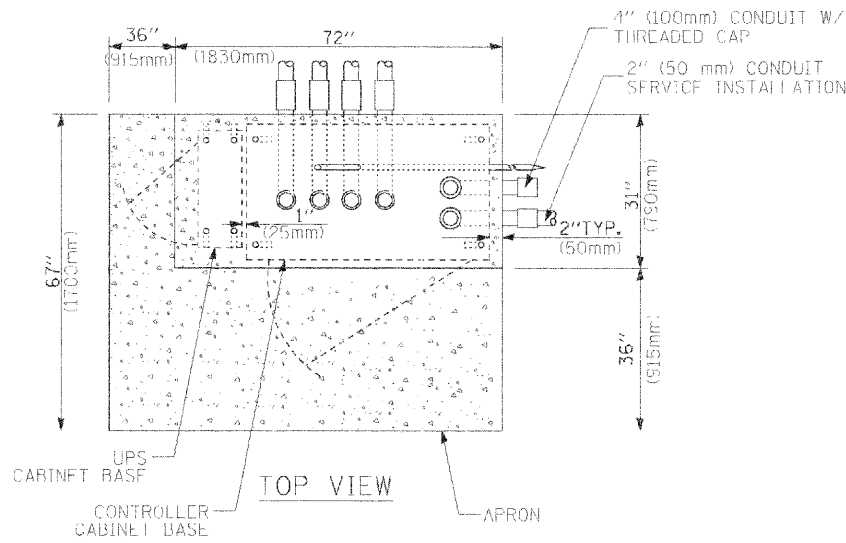
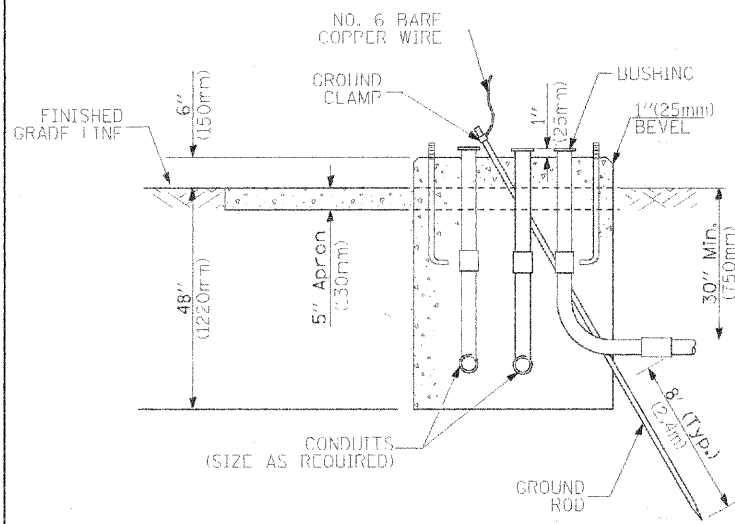


- NOTES:**
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
  - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

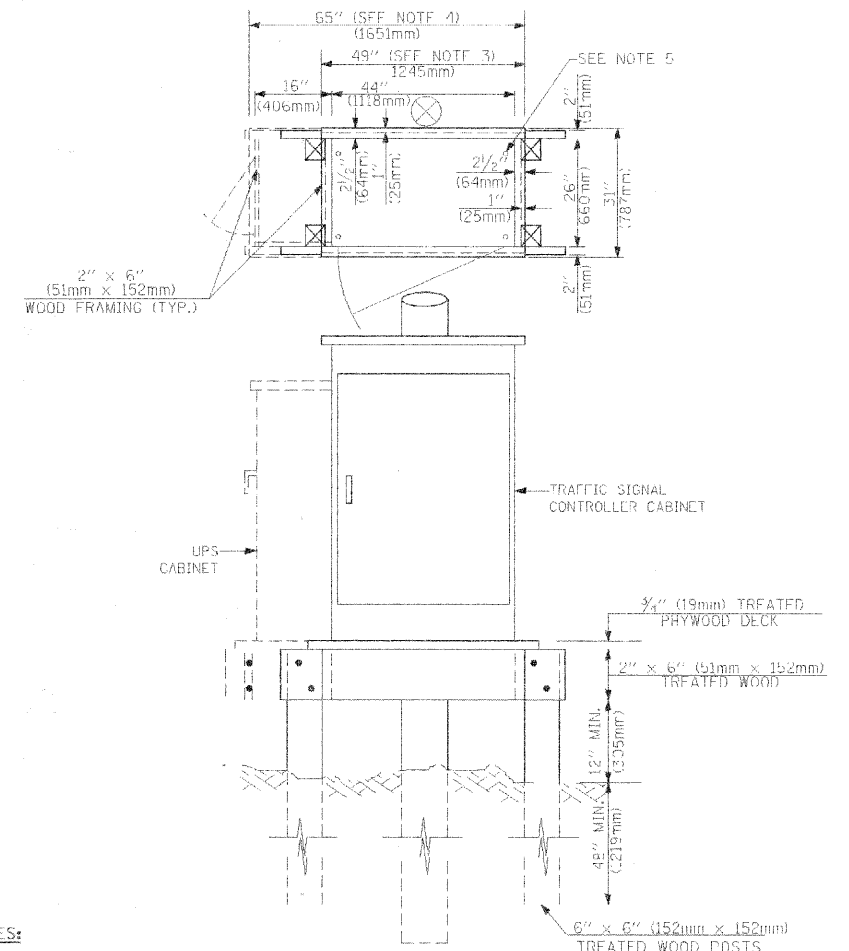
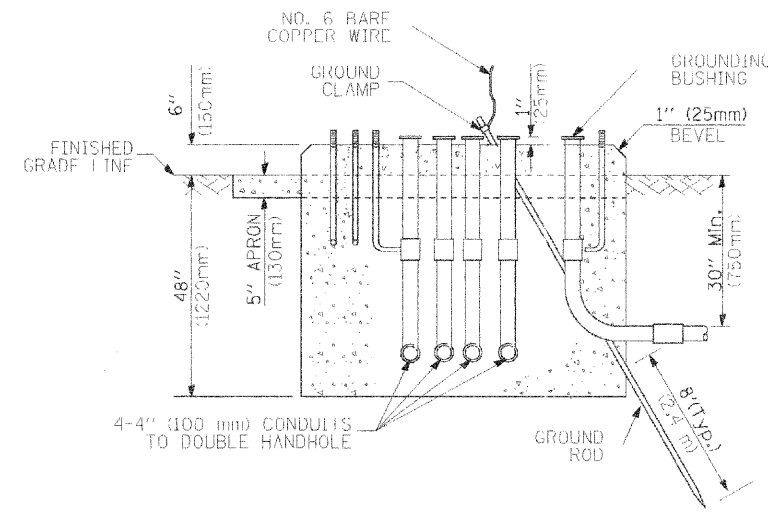
HANDHOLE TO INTERCEPT EXISTING CONDUIT



**TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**



**TYPE C  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**



- NOTES:**
1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
  2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
  3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
  4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
  5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
  6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

**CABLE SLACK**

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

**VERTICAL CABLE LENGTH**

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

**DEPTH OF FOUNDATION**

MAST ARM LENGTH	FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
	Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	16	8(25)

- NOTES:**
1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average unconfined compressive strength (QU) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
  2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
  3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
  4. For mast arm assemblies with dual arms refer to state standard B78001.

**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**



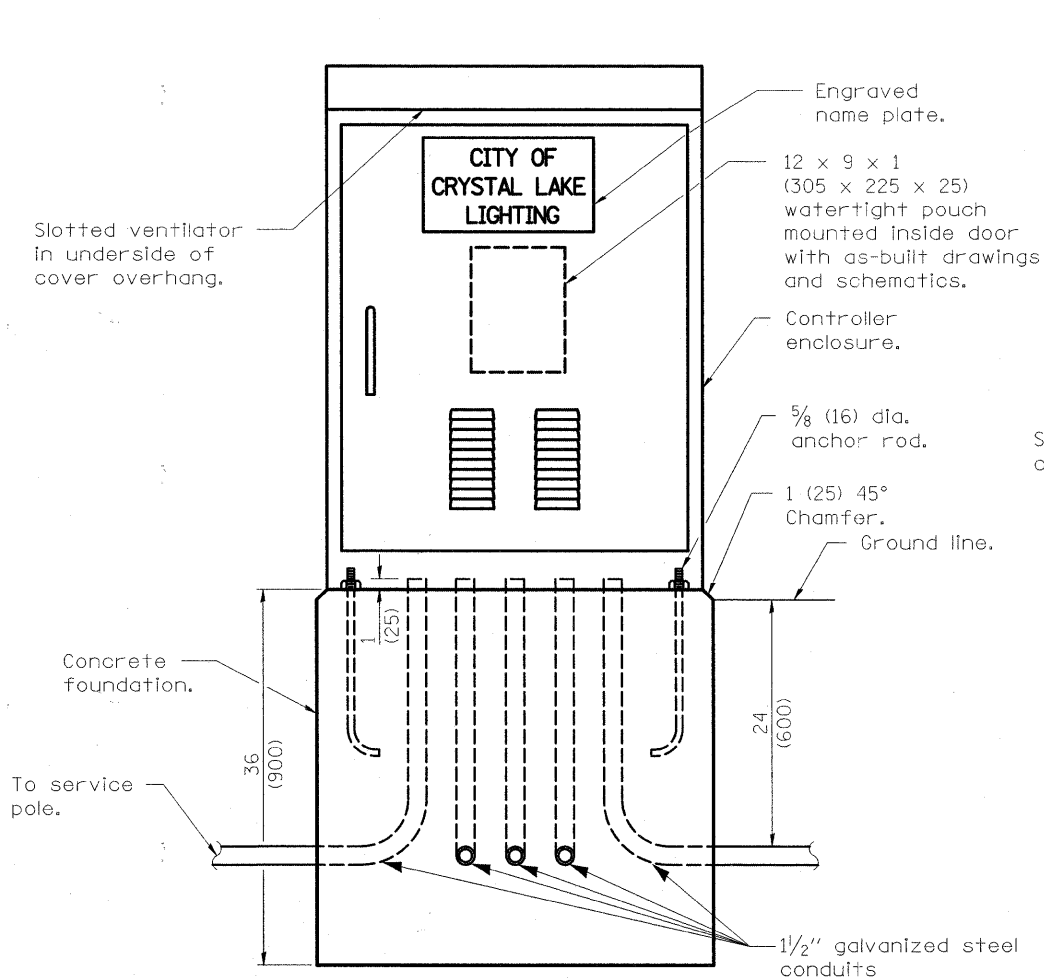
# TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				CALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM2F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH			CT	GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC	CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT							
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER							
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
MICROWAVE VEHICLE SENSOR											
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

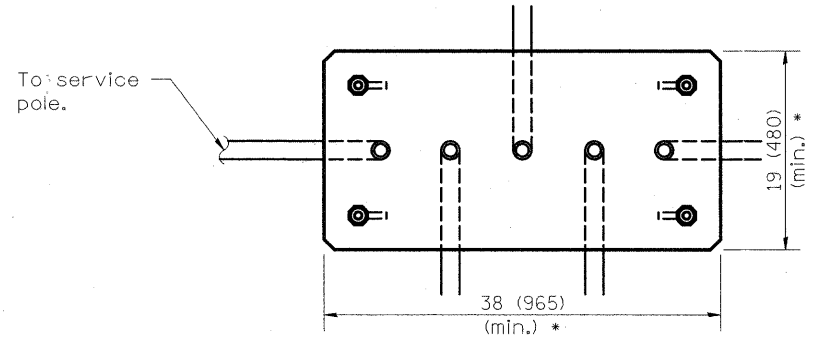
## RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

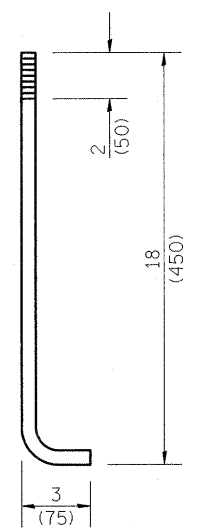




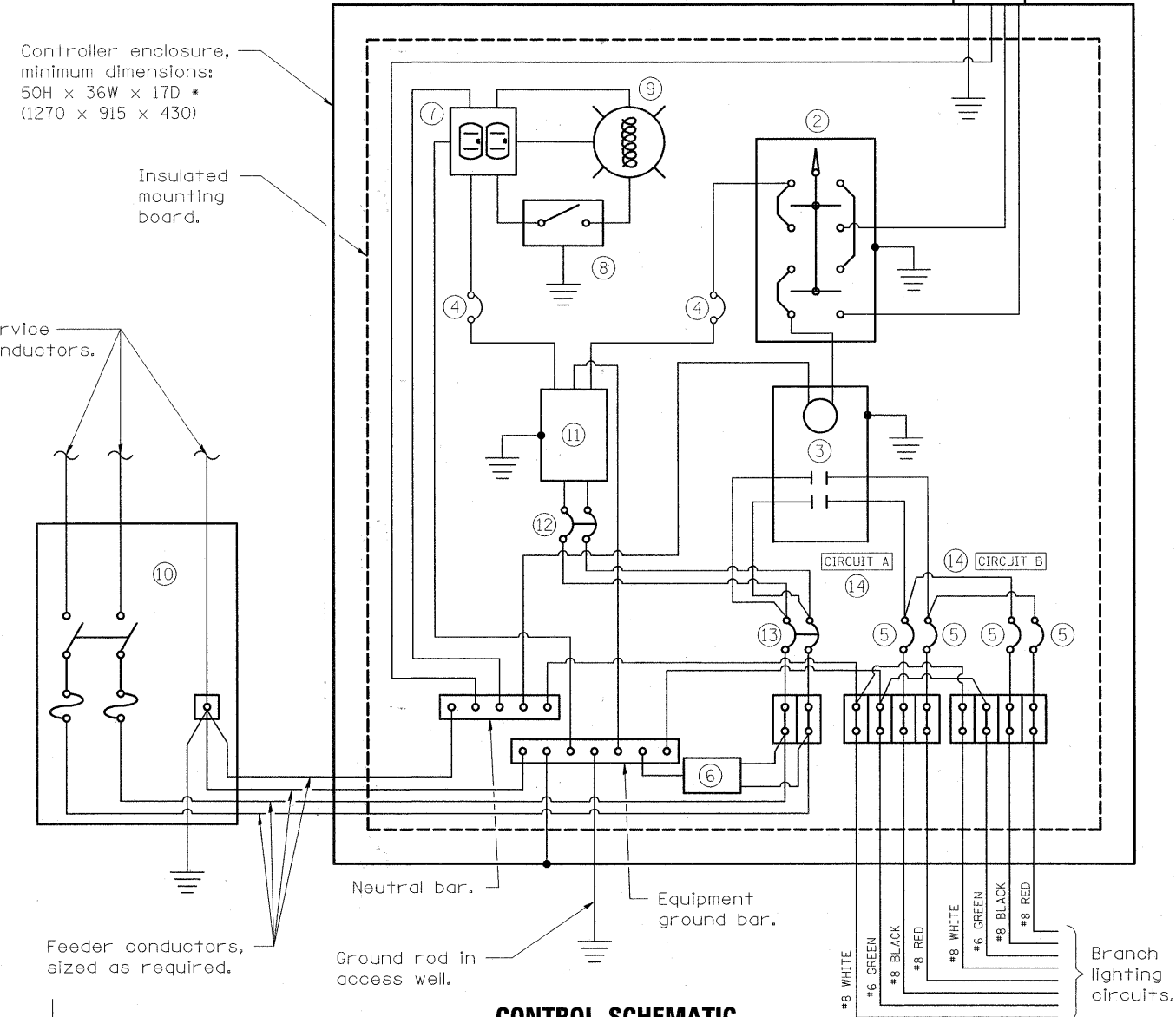
**LIGHTING CONTROLLER**



**FOUNDATION (PLAN)**  
(Work pad not shown.)



**ANCHOR ROD  
DETAIL**



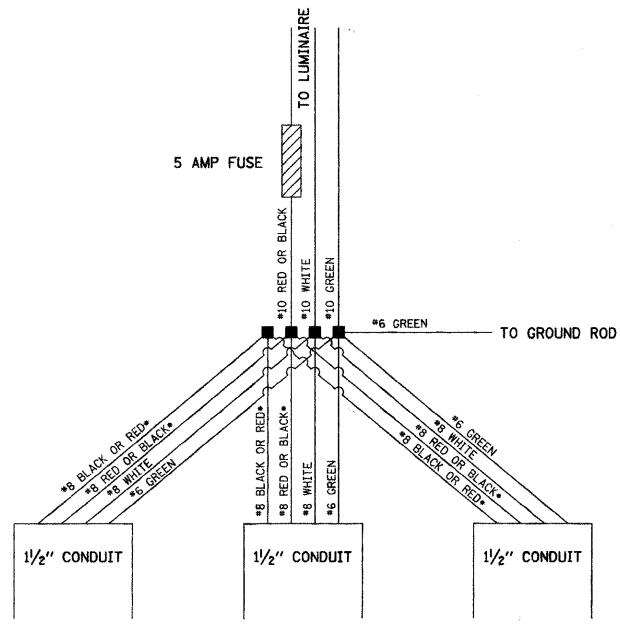
**CONTROL SCHEMATIC**

- ① Photocell with integral surge arrester.
- ② HAND-OFF-AUTO selector switch.
- ③ 100 amp\*, electrically held contactor.
- ④ 15 amp, 1-pole circuit breaker.
- ⑤ 20 amp\*, 1-pole circuit breaker (two spares required but not shown).
- ⑥ Surge arrester.
- ⑦ GFCI duplex receptacle.
- ⑧ Single-pole, single-throw switch.
- ⑨ Incandescent luminaire, enclosed and gasketed with 100 watt lamp.
- ⑩ Service disconnect switch - 2-pole, 3-wire, 100 amp\*, fused at 100 amp\*, solid neutral in NEMA 4X enclosure having lockable external handle.
- ⑪ Transformer - 1KVA\*, 480V primary, 120/240V secondary, single-phase, 60Hz.
- ⑫ 15 amp, 2-pole circuit breaker.
- ⑬ 100 amp\*, 2-pole circuit breaker.
- ⑭ Engraved name plates as shown.

\* Size larger as needed.

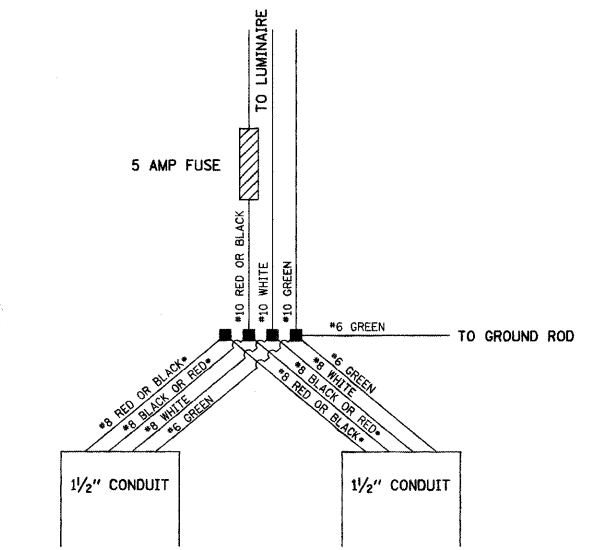
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ILL RTE 176 AND BRIARWOOD LIGHTING CONTROLLER BASE MOUNTED, 480V</b>			F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 39
P:\2010\100174\oad\phase 2\dwg\100174-lighting.dgn		DRAWN -	REVISED -		SCALE: 1"=50'	SHEET NO.	OF	SHEETS	STA.	TO STA.	<b>CONTRACT NO. 63551</b>	
		CHECKED -	REVISED -								ILLINOIS FED. AID PROJECT	
		DATE = 7/1/2011	REVISED -									



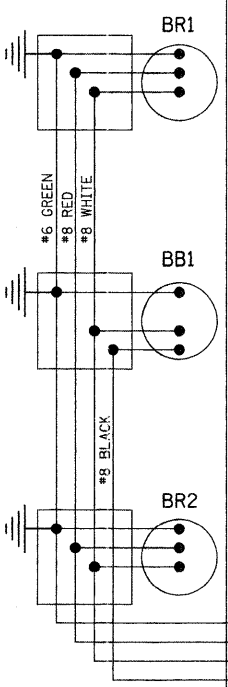
\* ONLY ONE CABLE, EITHER BLACK OR RED, IS USED IN EACH POLE. THE OTHER CABLE, RED OR BLACK, PASSES THROUGH THE POLE FOR USE IN THE NEXT POLE.

LIGHT STANDARD WIRING DETAIL  
THREE CONDUITS IN BASE

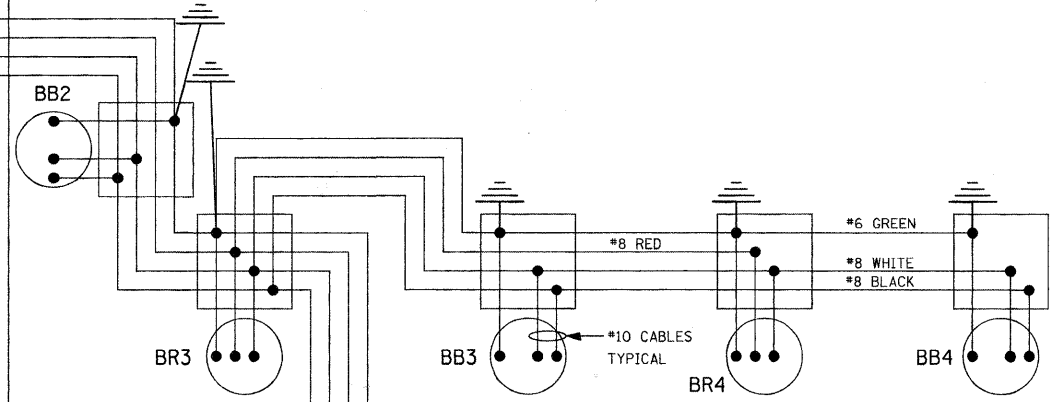


\* ONLY ONE CABLE, EITHER BLACK OR RED, IS USED IN EACH POLE. THE OTHER CABLE, RED OR BLACK, PASSES THROUGH THE POLE FOR USE IN THE NEXT POLE.

LIGHT STANDARD WIRING DETAIL  
TWO CONDUITS IN BASE



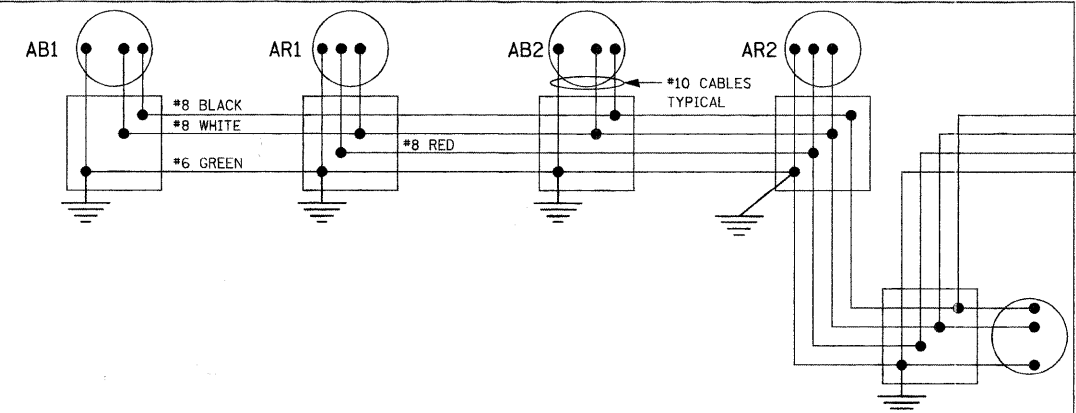
OHNSTAD ROAD



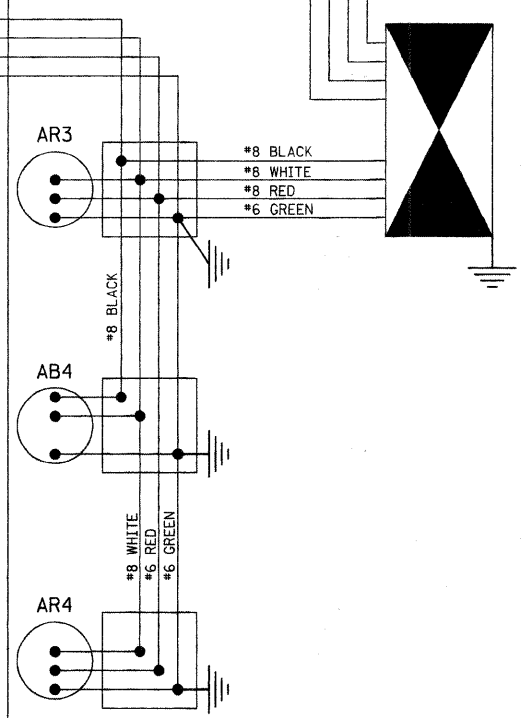
LEGEND

- CONTROLLER INSTALLATION
- LIGHT POLE
- LUMINAIRE
- GROUND ROD
- SPLICE
- CABLE, SIZE AND COLOR AS SPECIFIED

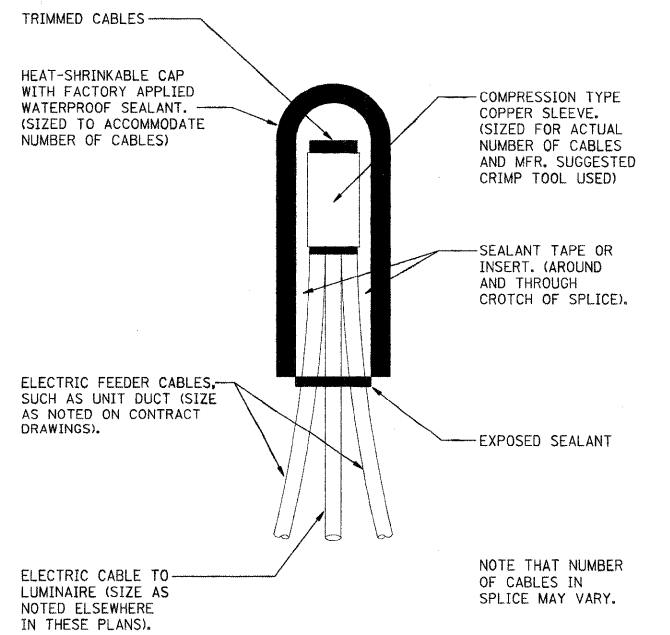
IL ROUTE 176



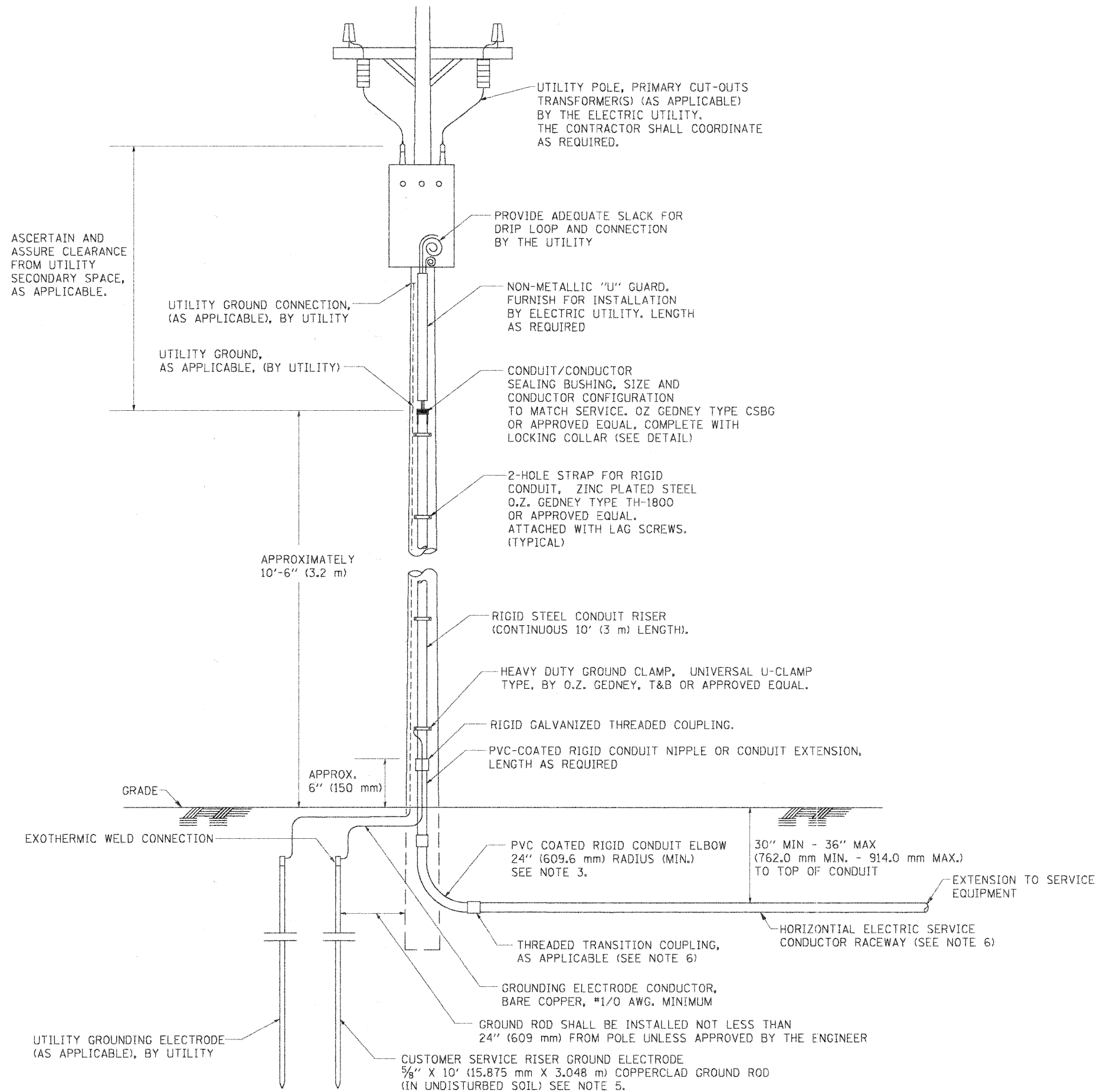
BRIARWOOD ROAD



SPLICING ELECTRIC CABLES BASIC MATERIALS AND METHODS



CIRCUIT	LOAD TABLE					
	RED PHASE		BLACK PHASE		TOTAL	
	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
A	5	1000	5	1000	10	2000
B	5	1000	5	1000	10	2000

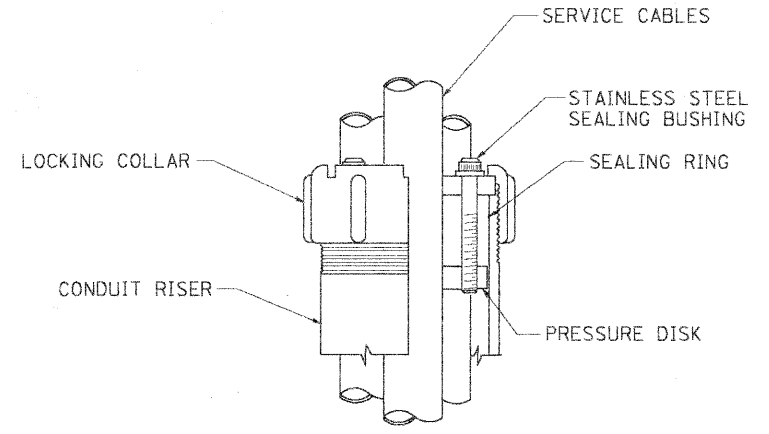


**APPLICATION**

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

**NOTES**

- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.

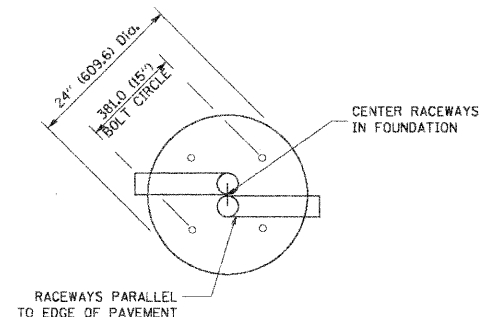


**SEALING BUSHING DETAIL**

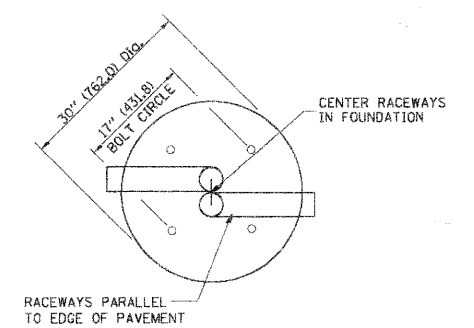
FILE NAME - W:\d\stetd\22x34\be220.dgn	USER NAME - gaglianob	DESIGNED -	REVISED - 03-03-06	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRIC SERVICE INSTALLATION AERIAL REMOTE DISCONNECT</b>		F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 41	
	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	<b>BE-220</b>		CONTRACT NO. 63551		
	PLOT DATE = 1/4/2008	CHECKED - MEA	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									

**LIGHT POLE FOUNDATION DEPTH TABLE**  
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ. FT.	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



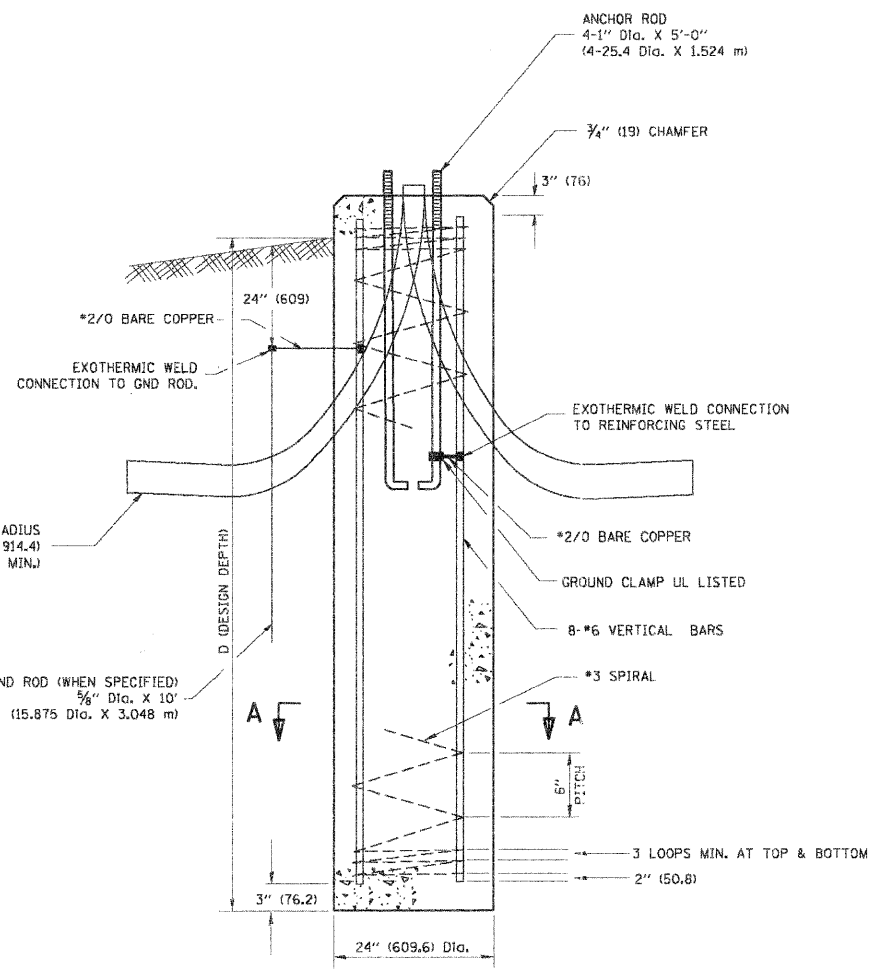
**TOP VIEW**



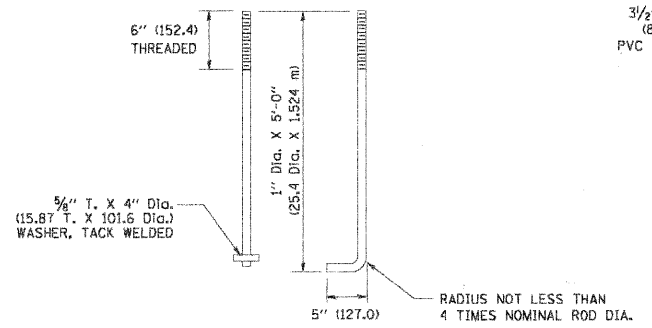
**TOP VIEW**

**NOTES**

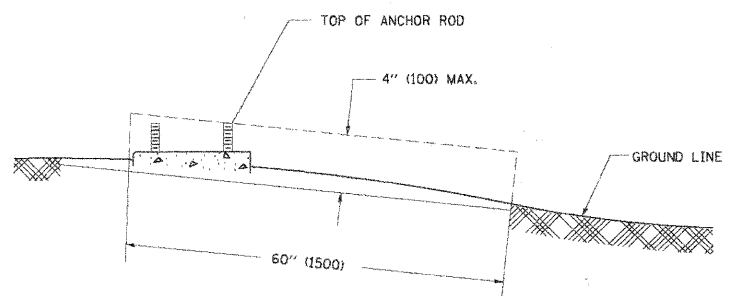
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SJ. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 0H, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UMG MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.



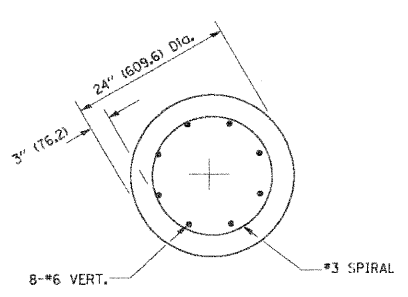
**FOUNDATION DETAIL**



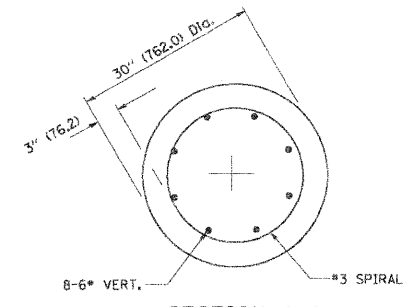
**ANCHOR ROD DETAIL**



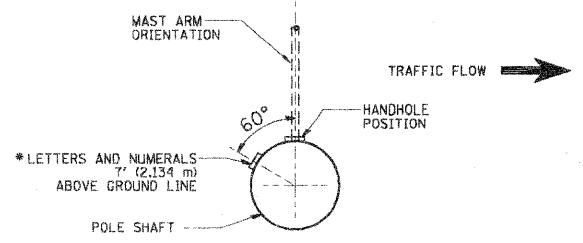
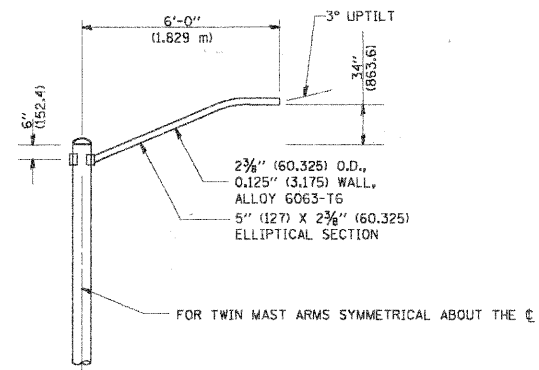
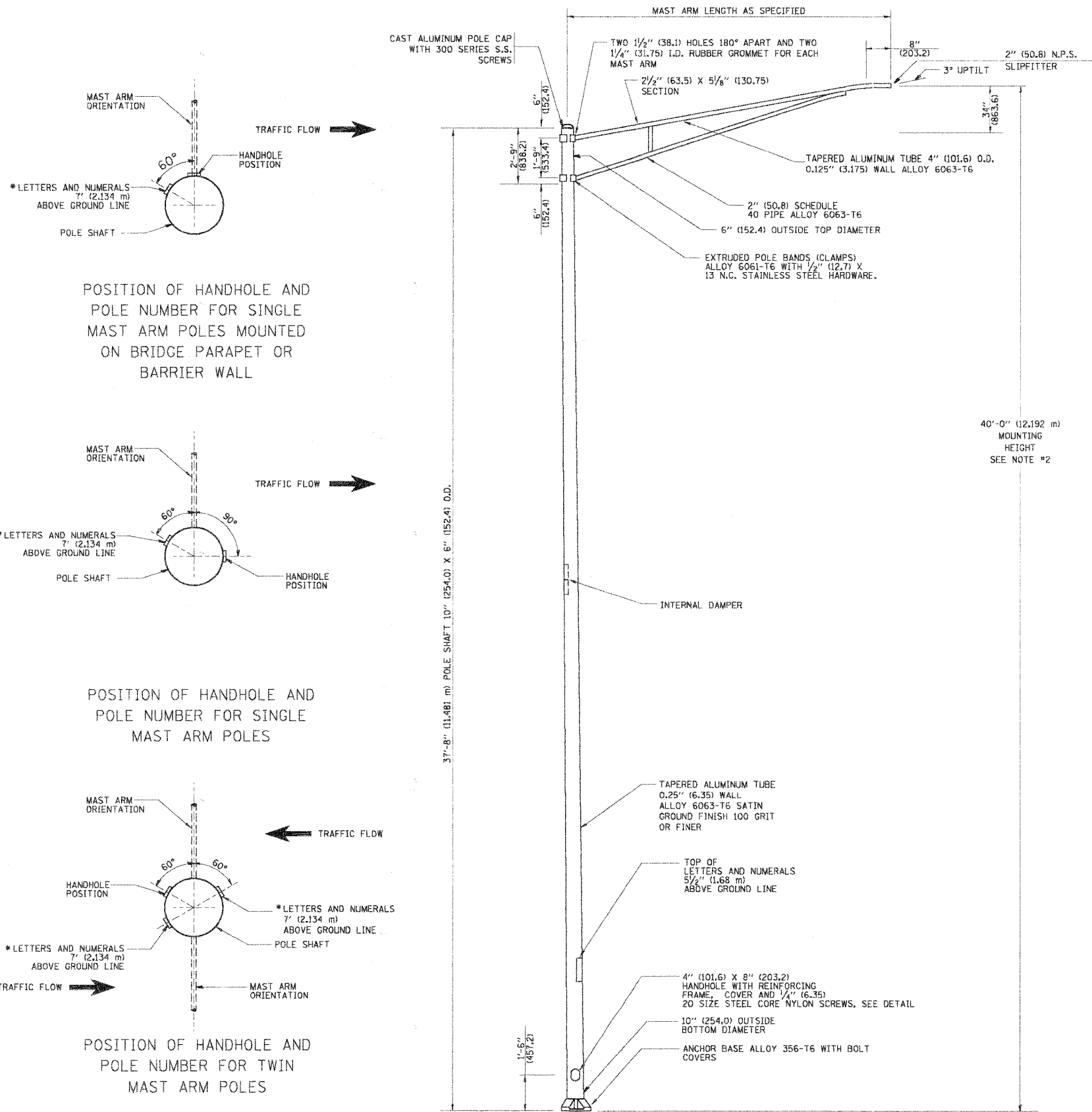
**FOUNDATION EXTENSION DETAIL**



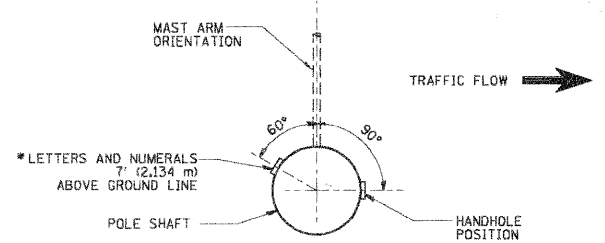
**SECTION A-A**



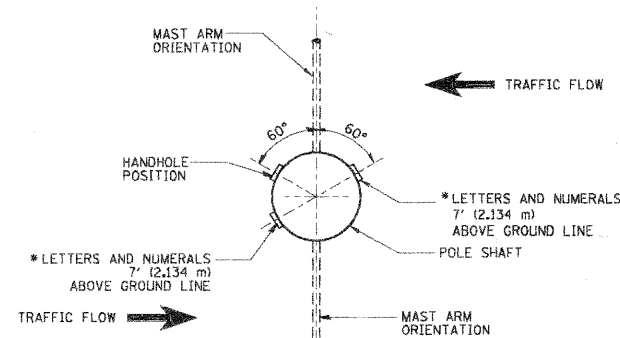
**SECTION A-A**



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL

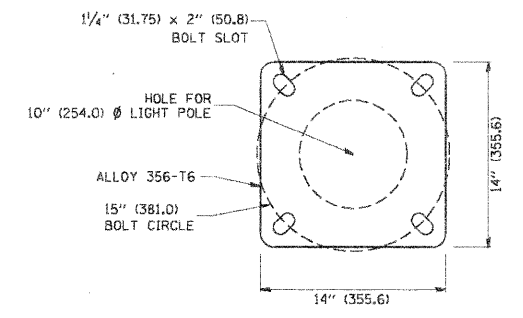


POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES

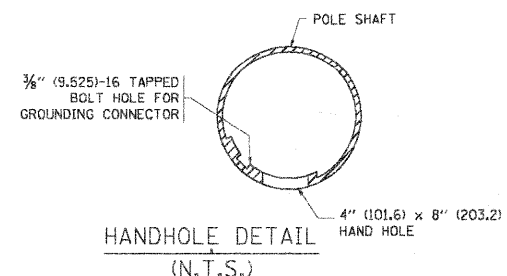


POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
  2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
  3. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
  4. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
  5. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
  6. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
  7. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



LIGHT POLE BASE PLATE DETAIL  
15 INCH (381.0) BOLT CIRCLE

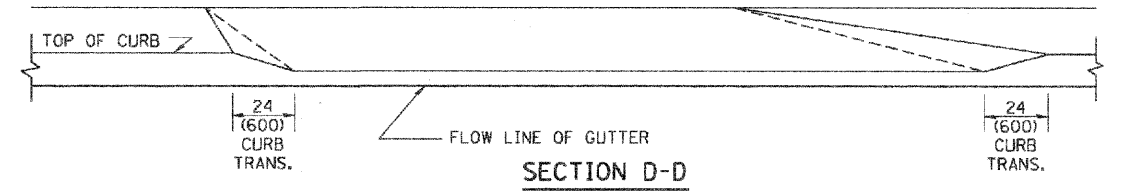
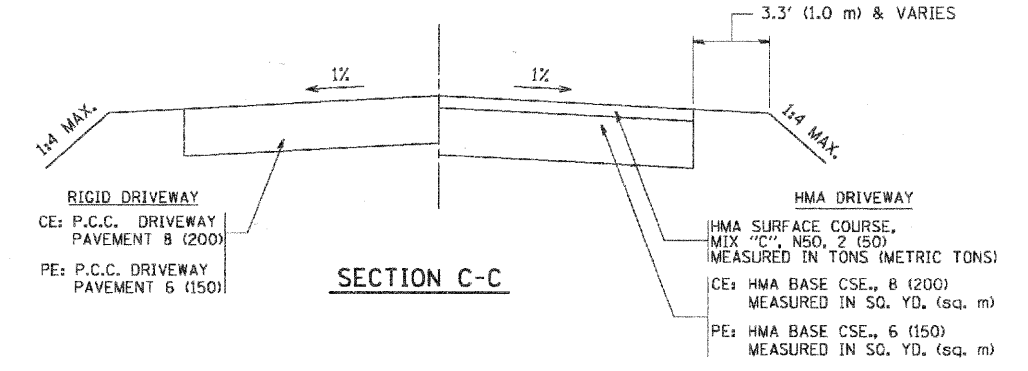
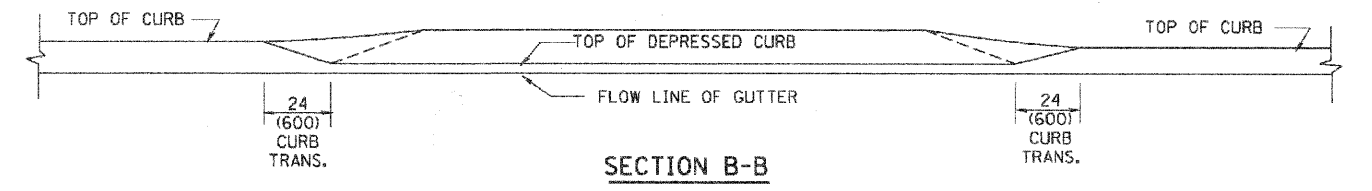
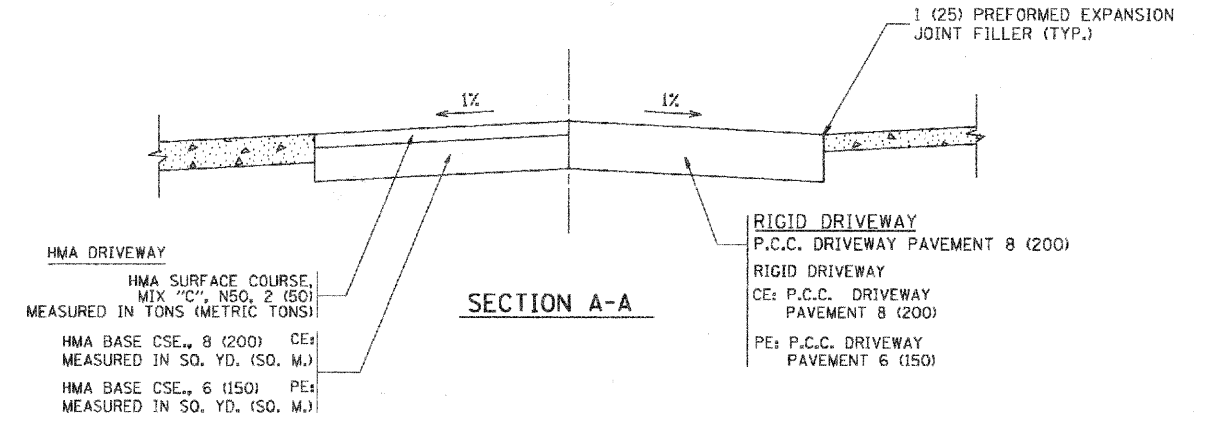
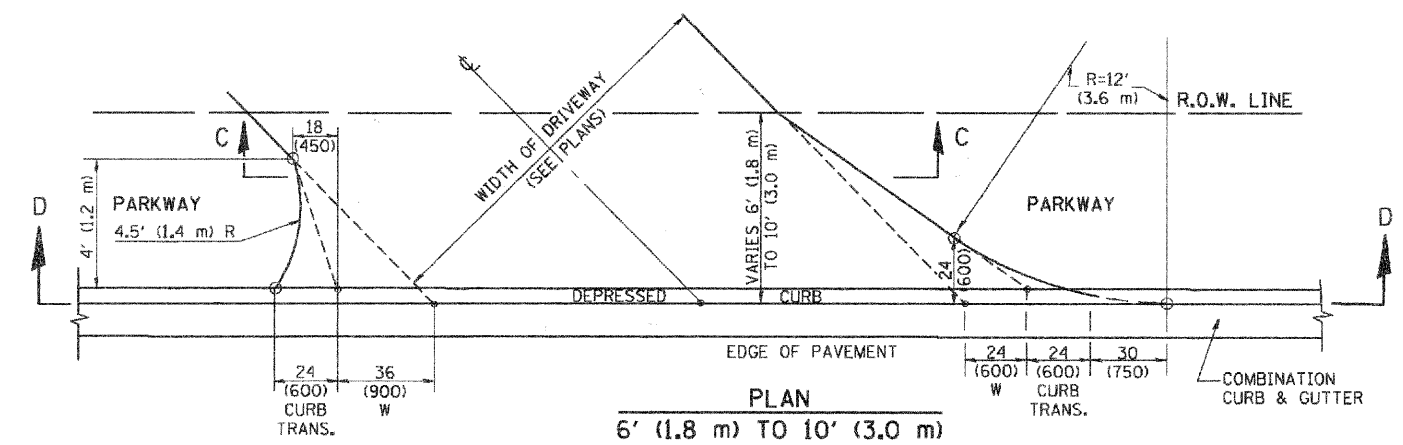
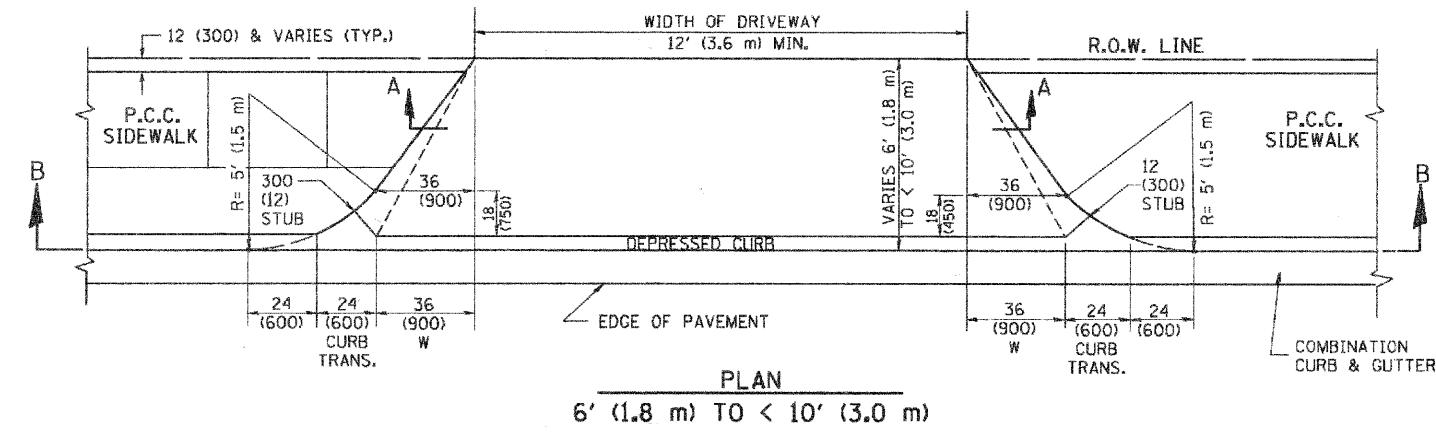
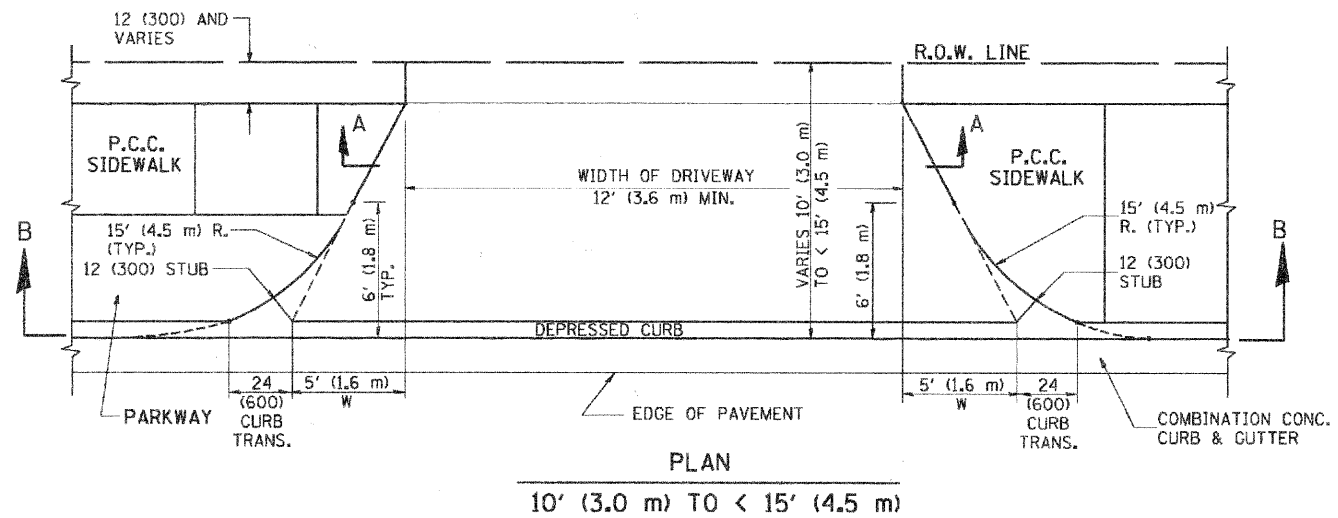


HANDHOLE DETAIL  
(N.T.S.)

FILE NAME = W:\dvs\std\22x34\be481.dgn	USER NAME = gajlanobt	DESIGNED - DRAWN -	REVISED - R. TOMSONS 09-06-00 REVISED - R. TOMSONS 09-02-03	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ALUMINUM LIGHT POLE 40'-0" (12.192 m) MOUNTING HEIGHT</b>		F.A.P. R.T.E. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 43
PLDT SCALE = 50.000" / IN.	PLDT DATE = 1/4/2008	CHECKED - DATE -	REVISED - REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	<b>BE-401</b>		CONTRACT NO. 63551	
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT											







**GENERAL NOTES**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

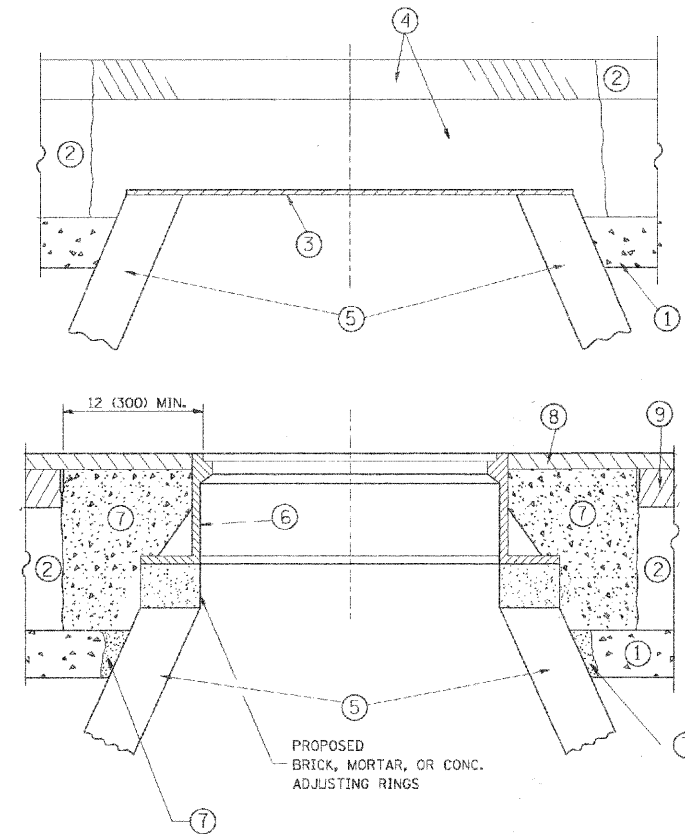
COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

FILE NAME = W:\data\td\22\34\bd02.dgn	USER NAME = geglionobt	DESIGNED - R. SHAH	REVISED - T. HOLTZ 04-08-97	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DRIVEWAY DETAILS</b>			F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - M. GOMEZ 04-06-01		<b>DISTANCE BETWEEN ROW AND FACE OF CURB &lt; 15' (4.5 m)</b>			335	11-00114-00-CH	McHENRY	56	45
		PLOT SCALE = 50.0000' / IN.	REVISED - P. LaFLEUR 04-15-03		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	<b>BD400-02 (BD-02)</b>				
		PLOT DATE = 1/4/2008	DATE = 11-06-95		REVISED - R. BORO 01-01-07				CONTRACT NO. 63551			



**CONSTRUCTION PROCEDURES**

- STAGE 1 (BEFORE PAVEMENT MILLING)**
- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
  - B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
  - C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
  - D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

- STAGE 2 (AFTER PAVEMENT MILLING)**
- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
  - B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
  - C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

\*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

**LEGEND**

- ① SUB-BASE GRANULAR MATERIAL
- ⑥ FRAME AND LID (SEE NOTES)
- ② EXISTING PAVEMENT
- ⑦ CLASS PP-1\* CONCRETE
- ③ 36 (900) DIAMETER METAL PLATE
- ⑧ PROPOSED HMA SURFACE COURSE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑨ PROPOSED HMA BINDER COURSE
- ⑤ EXISTING STRUCTURE

**LOCATION OF STRUCTURES:**

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

**BASIS OF PAYMENT:** THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL" NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

**NOTES:**

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

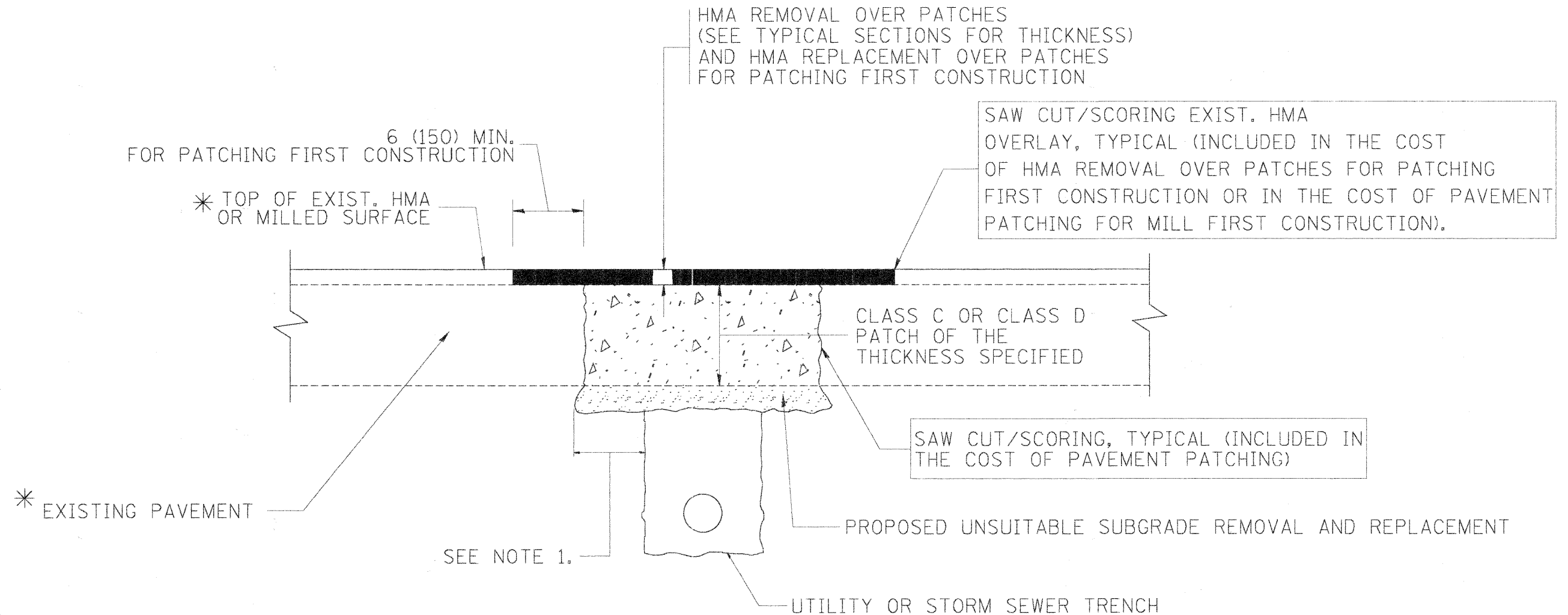
THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME -	USER NAME - lsgao	DESIGNED - R. SHAH	REVISED - A. ABBAS 03-21-97	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING</b>	F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN	REVISED - R. WIEDEMAN 05-14-04			335	11-00114-00-CH	McHENRY	56	46	
	PLOT SCALE - 49.9999' / IN.	CHECKED -	REVISED - R. BORO 01-01-07			<b>BD600-03 (BD-B)</b>		CONTRACT NO. 63551			
	PLOT DATE - 3/11/2011	DATE 10-25-94	REVISED - R. BORO 03-09-11			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

**NOTES:**

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

**SEQUENCE OF CONSTRUCTION (PATCHING FIRST)**

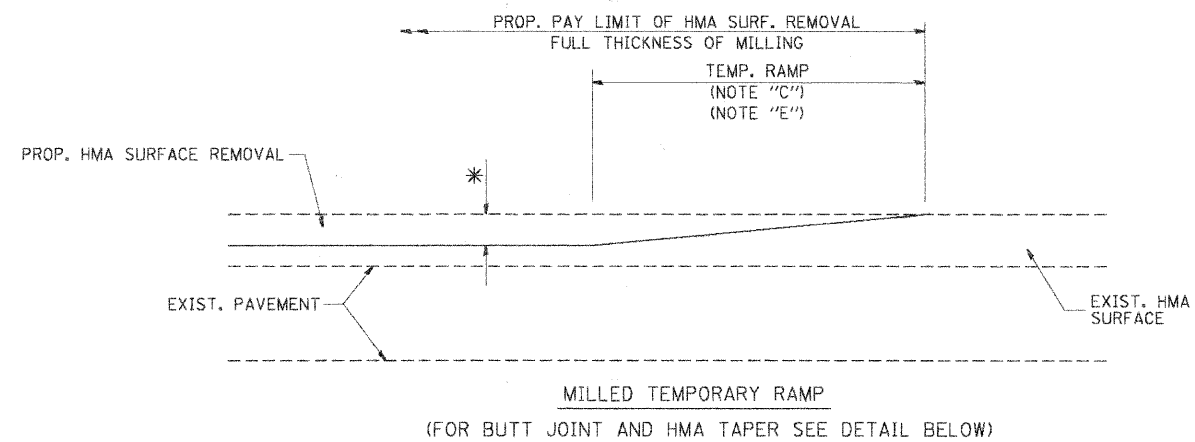
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

**SEQUENCE OF CONSTRUCTION (MILLING FIRST)**

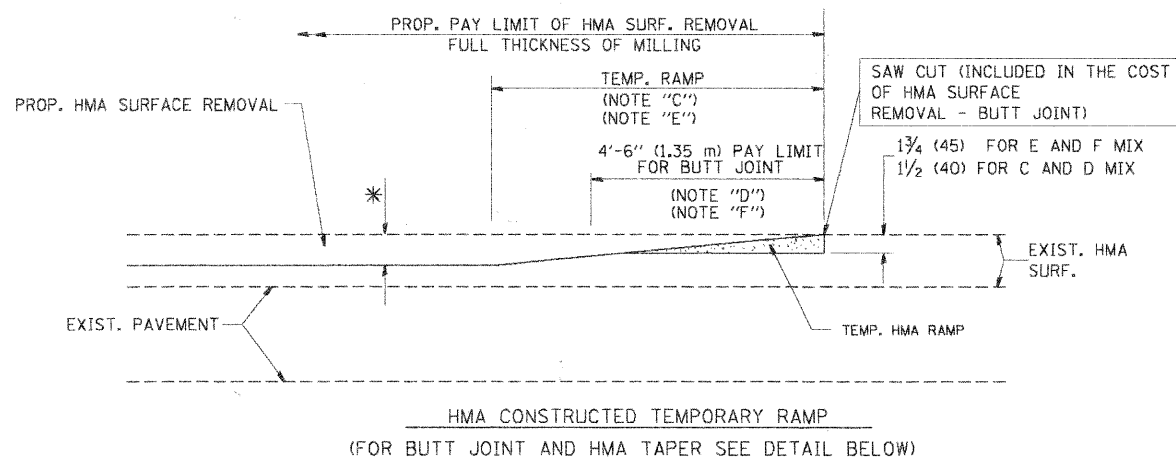
1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

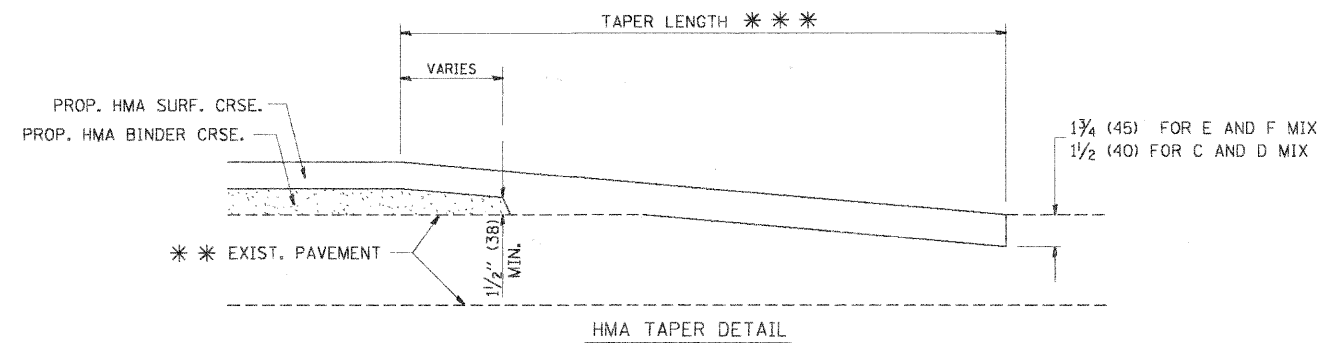
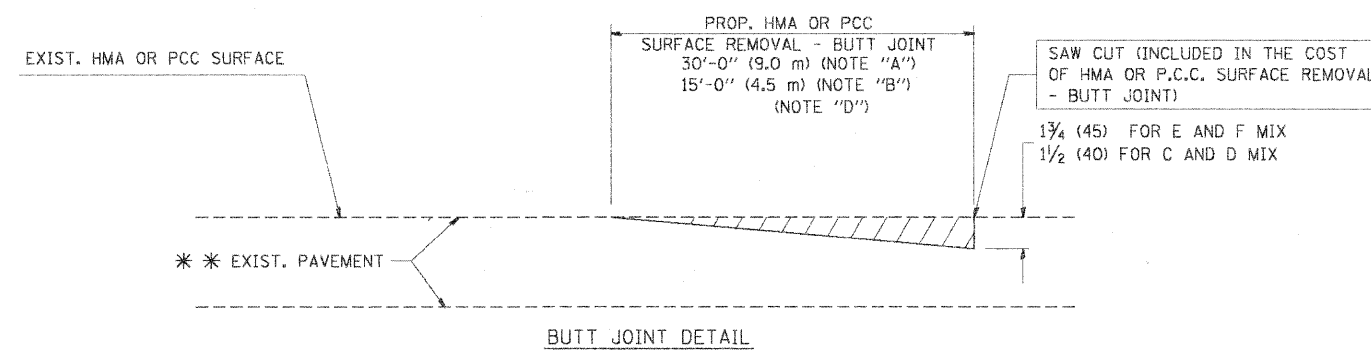
FILE NAME =	USER NAME = bauerdj	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\projects\datatd22x34\bd22.dgn		DRAWN -	REVISED - R. BORO 01-01-07			335	11-00114-00-CH	McHENRY	56	47
PLOT SCALE = 50,000 ' / IN.		CHECKED -	REVISED - R. BORO 09-04-07			<b>BD400-04 (BD-22)</b>		CONTRACT NO. 63551		
PLOT DATE = 10/27/2008		DATE - 10-25-94	REVISED - K. ENG 10-27-08			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
					SCALE: NONE	SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.	



**OPTION 1**



**OPTION 2**  
**TYPICAL TEMPORARY RAMP**



**TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY**

\* \* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

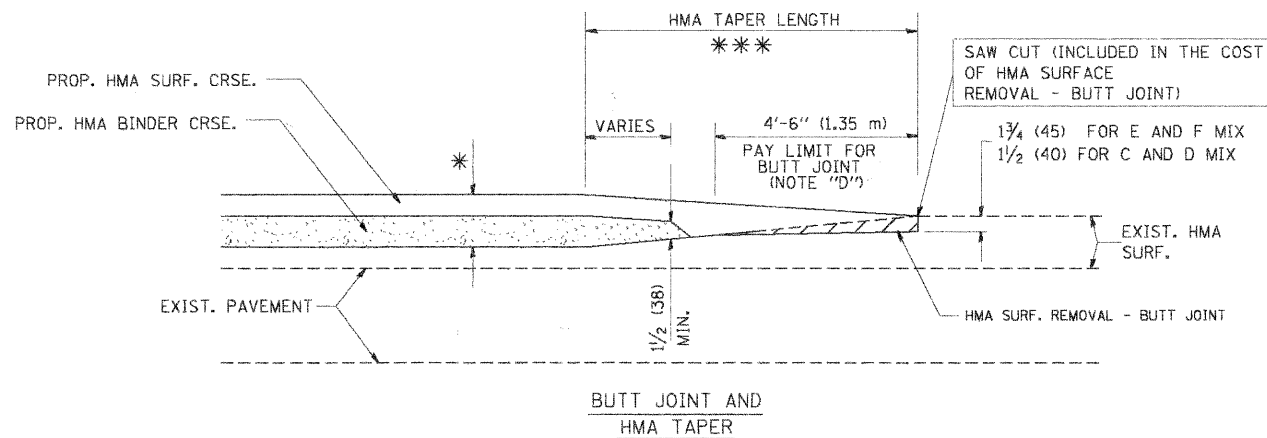
**NOTES**

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \* \* \* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

**BASIS OF PAYMENT:**

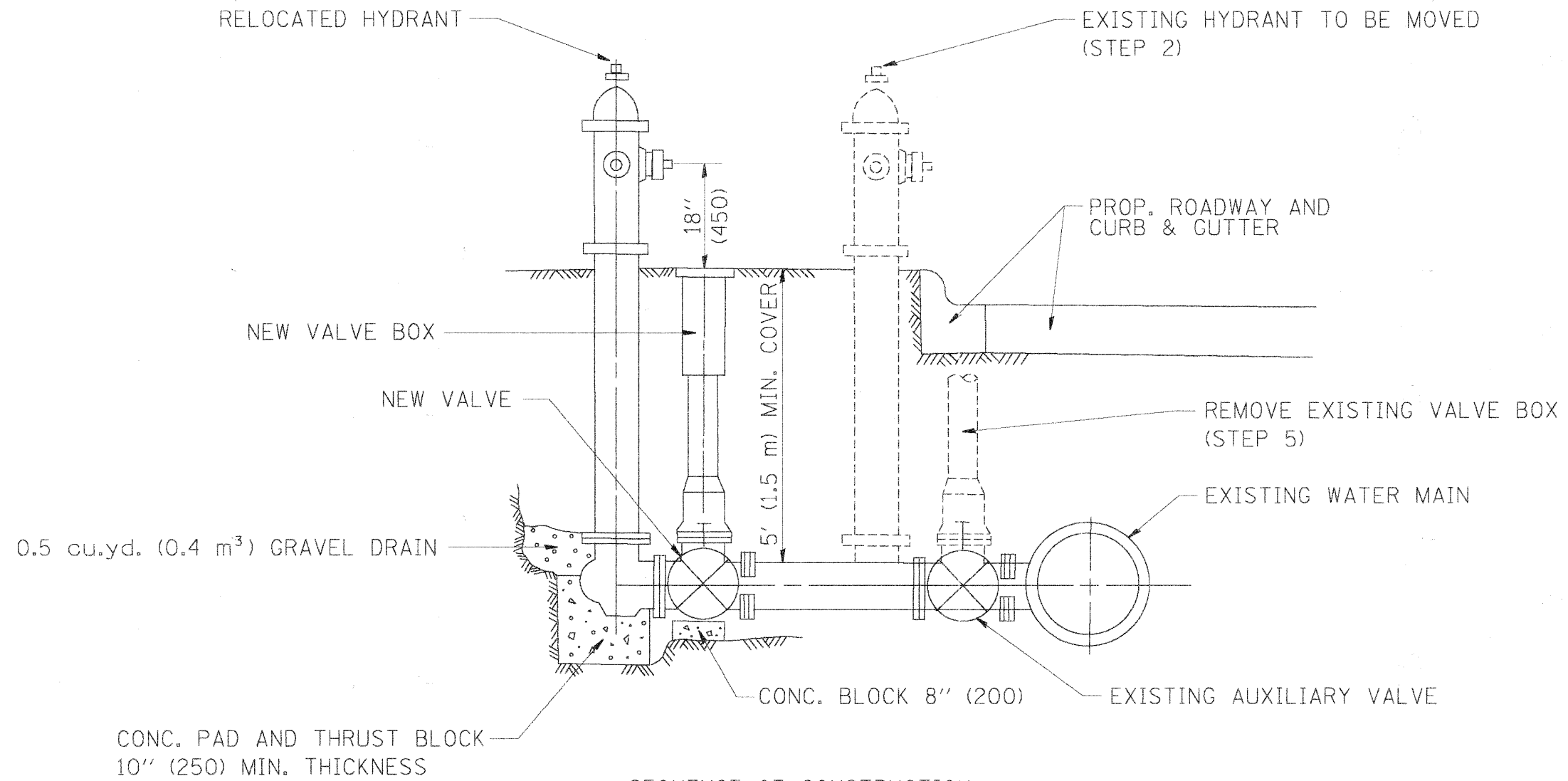
THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



**TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING**

FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BUTT JOINT AND HMA TAPER DETAILS</b>	F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 48	
PLDT SCALE = 5/8" = 1" / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	CONTRACT NO. 63551		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
PLDT DATE = 1/4/2009	DATE - 06-13-90	REVISED - R. BORO 01-01-07									



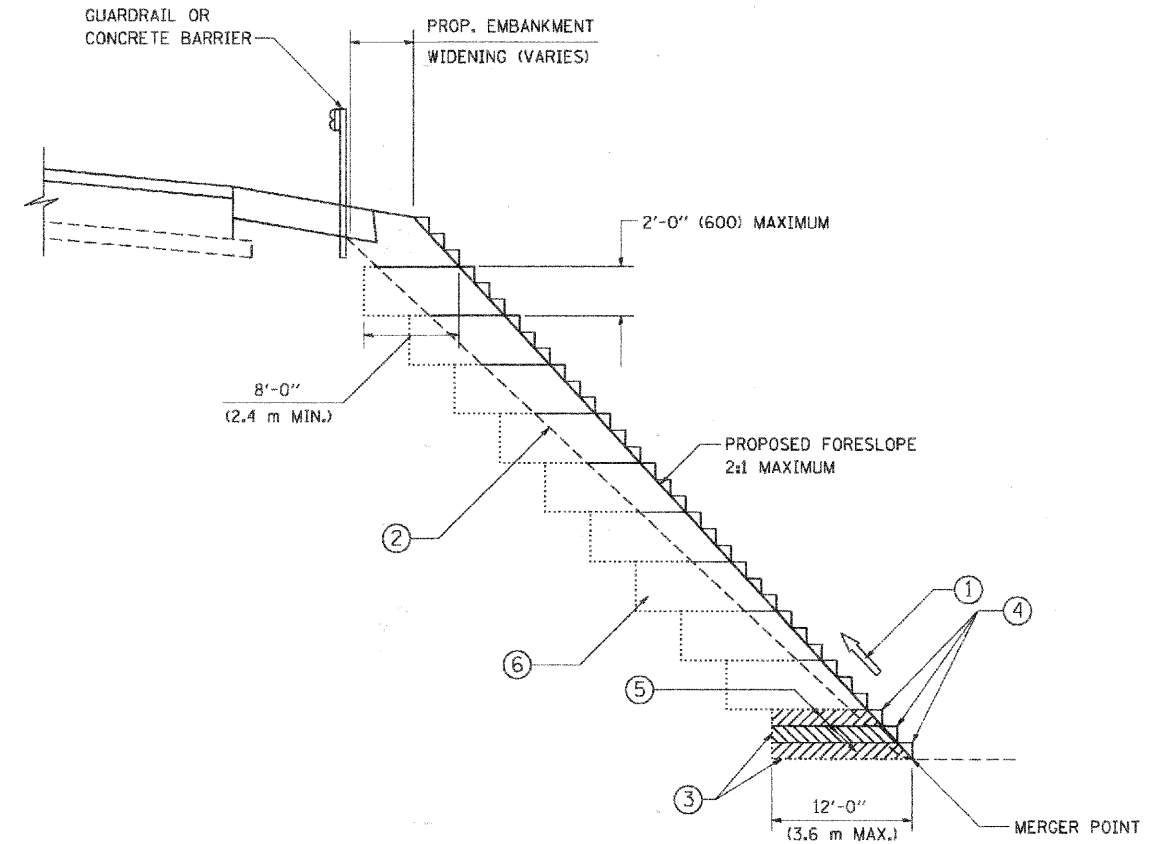
- SEQUENCE OF CONSTRUCTION:
1. CLOSE EXISTING VALVE.
  2. REMOVE EXISTING HYDRANT.
  3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
  4. RELOCATE EXISTING HYDRANT.
  5. OPEN EXISTING VALVE, REMOVE BOX.
  6. BACKFILL.
  7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

## FIRE HYDRANT TO BE MOVED

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\dsh\std\22x34\bd36.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. SHAH 09-09-94	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FIRE HYDRANT TO BE MOVED</b>			F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY MCHENRY	TOTAL SHEETS 56	SHEET NO. 49
	PLDT SCALE = 5/8" = 1' / INL	DRAWN -	REVISED - R. SHAH 10-25-94		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	<b>BD-36</b>	CONTRACT NO.	63551	
	PLDT DATE = 1/4/2000	CHECKED -	REVISED -		FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT							
		DATE -	REVISED -									



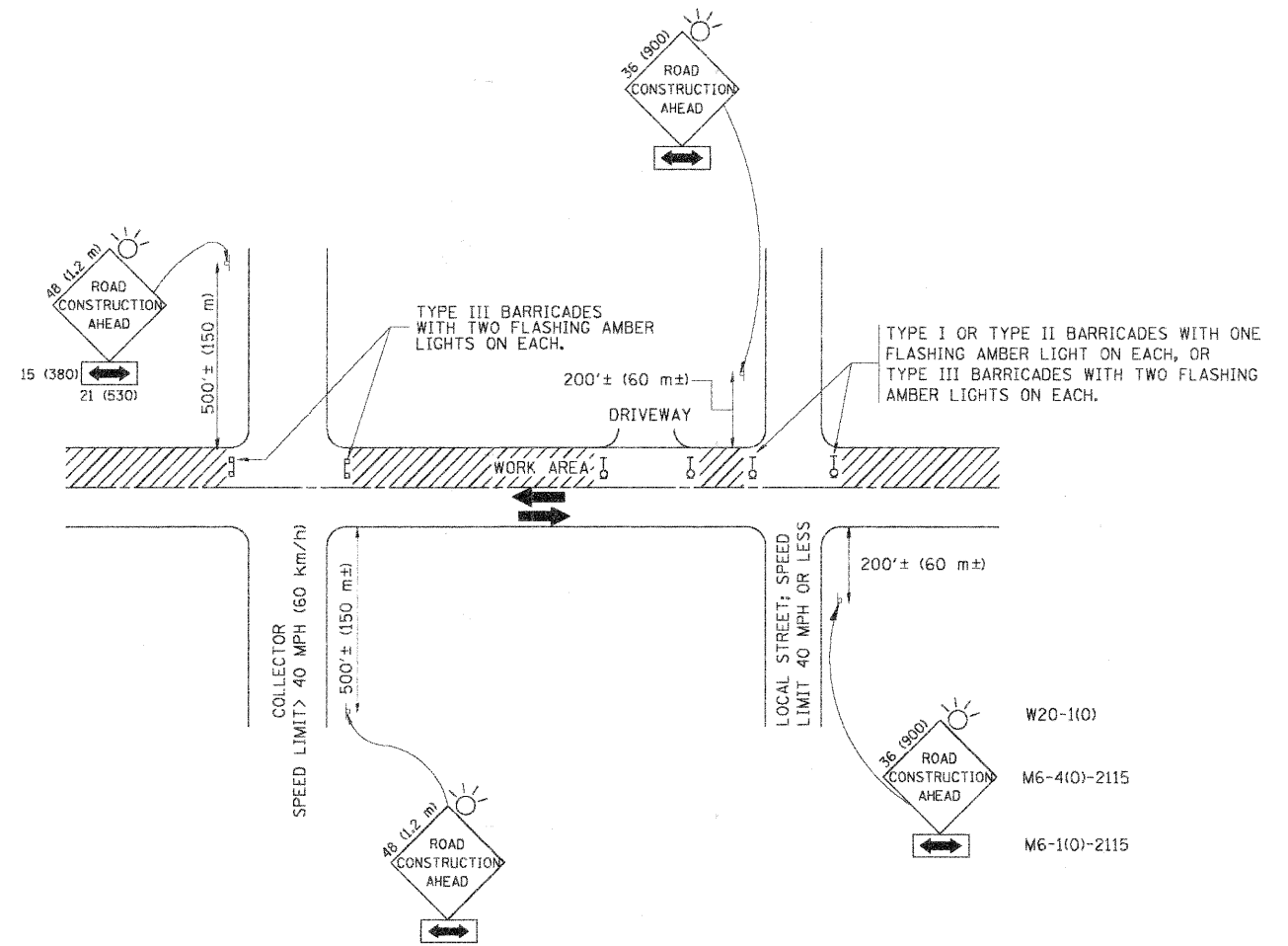
TYPICAL BENCHING DETAIL  
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)  
UNLESS OTHERWISE SHOWN.

FILE NAME = W:\dvs\std\22x34\bd51.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BENCHING DETAIL FOR EMBANKMENT WIDENING</b>			F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	DRAWN - CADD	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	335	11-00114-00-CH	McHENRY	56
PLOT DATE = 1/4/2008	DATE - 06-16-04	CHECKED - S.E.B.	REVISED -					<b>BD-51</b>		CONTRACT NO.	63551	
		DATE - 06-16-04	REVISED -					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

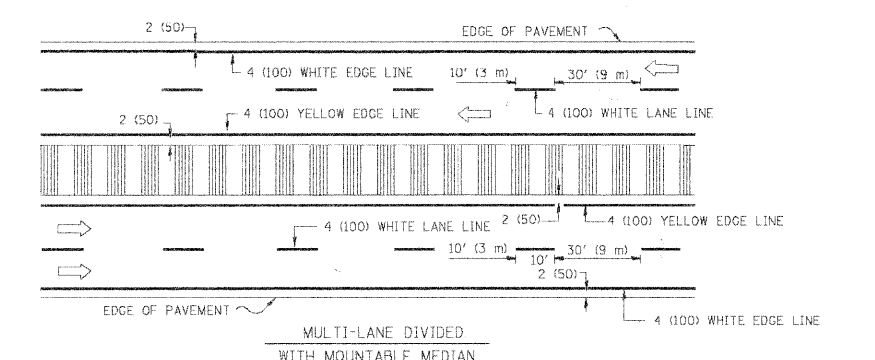
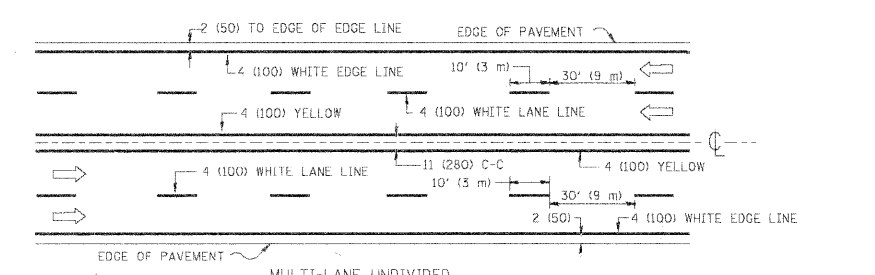
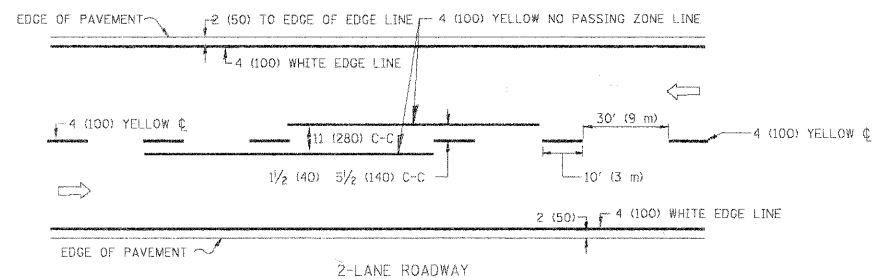
NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
  1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
 

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

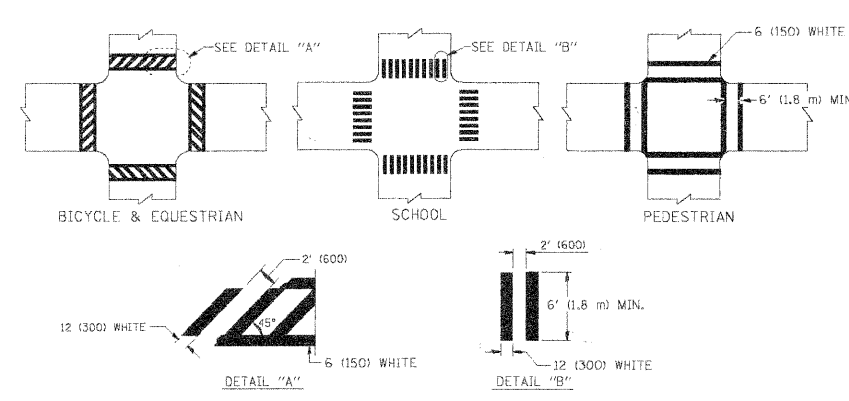
All dimensions are in millimeters (inches) unless otherwise shown.

FILE NAME = W:\distatd\22x34\td18.dgn	USER NAME = gaglianobt	DESIGNED = LHA	REVISED = J. OBERLE 10-18-95	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS</b>			F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY MCHENRY	TOTAL SHEETS 56	SHEET NO. 51
PLOT SCALE = 50.000" / IN.	CHECKED =	DATE = 06-89	REVISED = A. HOUSEH 03-06-96		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	<b>TC-10</b>		CONTRACT NO. 63551	
PLOT DATE = 1/4/2008	DATE = 06-89	REVISED = T. RAMMACHER 01-06-00	REVISED = A. HOUSEH 10-15-96						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

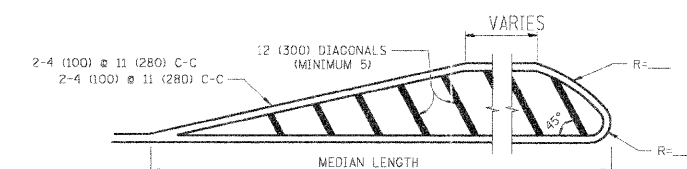
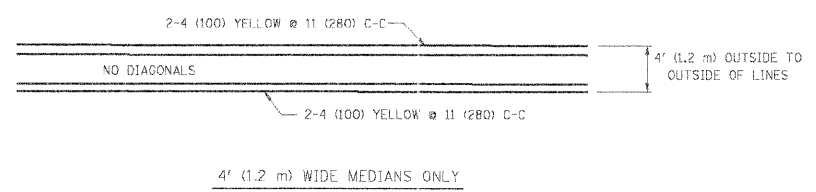


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

**TYPICAL LANE AND EDGE LINE MARKING**

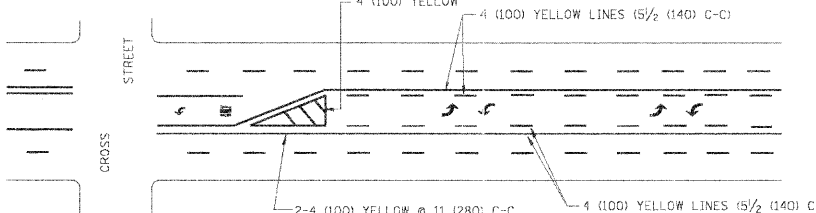


**TYPICAL CROSSWALK MARKING**



FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.  
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

**MEDIANS OVER 4' (1.2 m) WIDE**

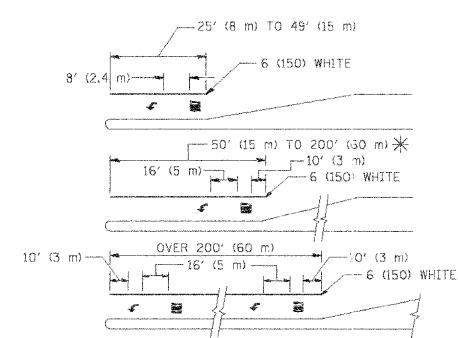


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



**MEDIAN WITH TWO-WAY LEFT TURN LANE**

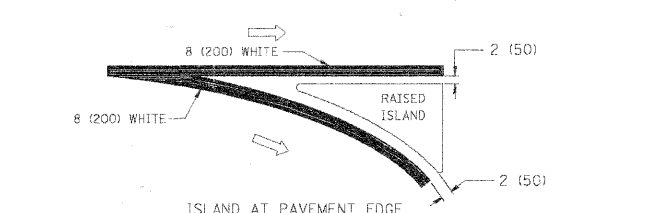
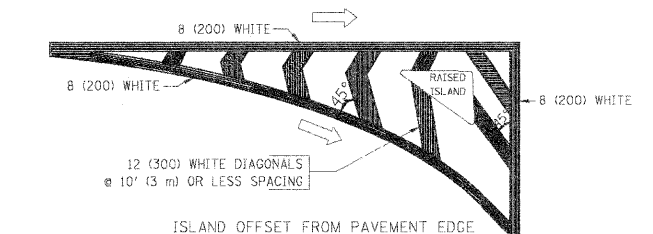
**TYPICAL PAINTED MEDIAN MARKING**



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 \* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".  
 AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

**TYPICAL LEFT (OR RIGHT) TURN LANE**

**TYPICAL TURN LANE MARKING**



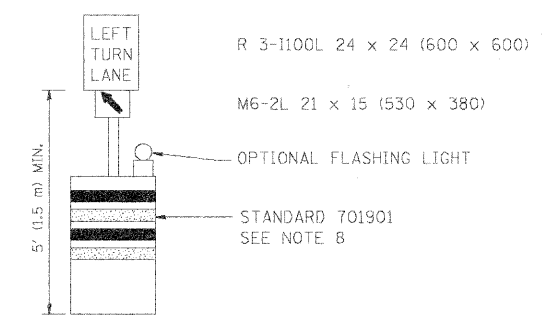
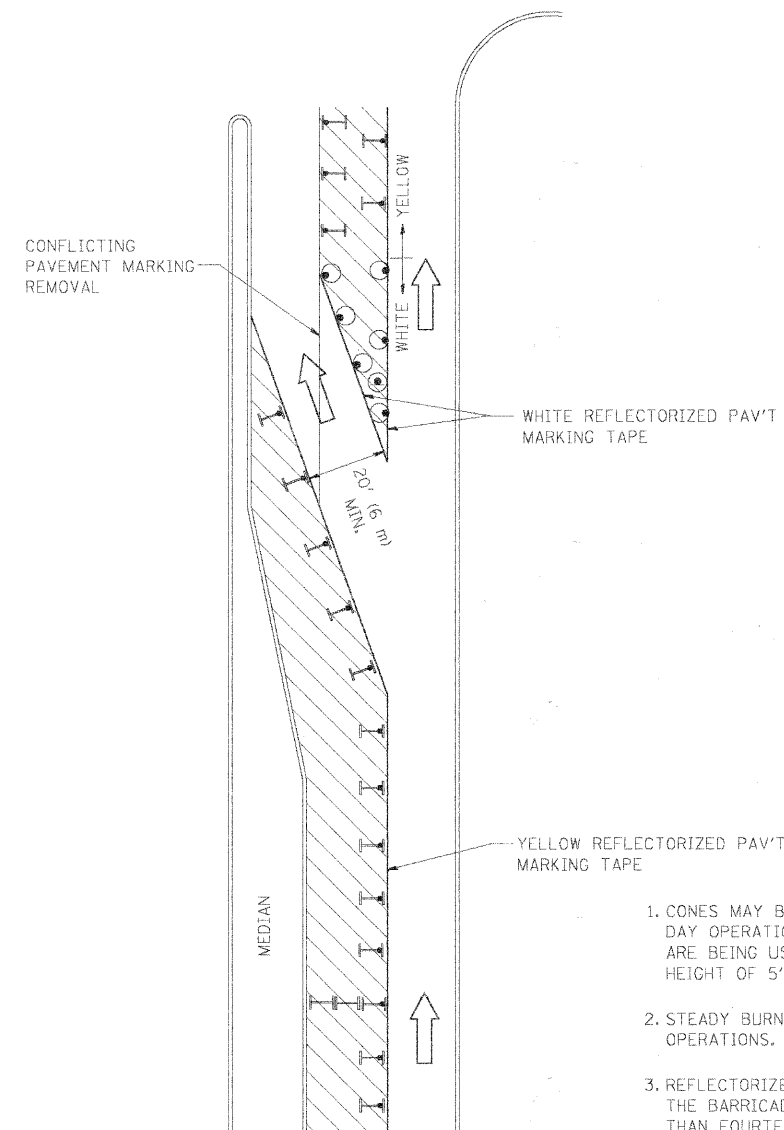
**TYPICAL ISLAND MARKING**

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION OR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.



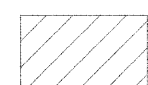







**GENERAL NOTES**

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHR 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

**LEGEND**

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

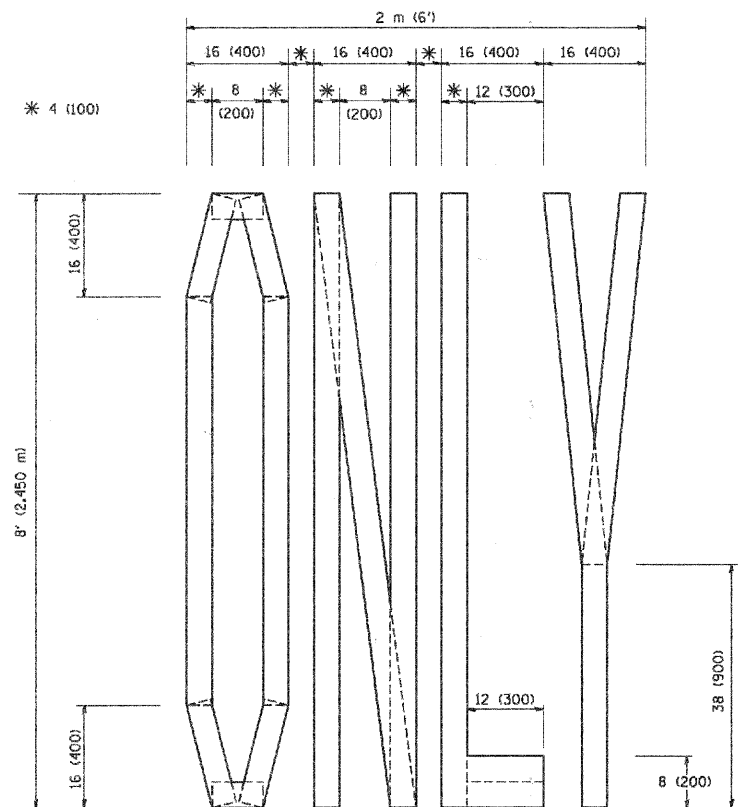
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ca\pw\work\PW\DOT\DRIVAKOSDN\d0100315\14.dgn		REVISED - A. HOUSEH 11-07-95	REVISED -
	PLOT SCALE = 49.9999 1/4 IN.	REVISED - A. HOUSEH 10-12-96	REVISED -
	PLOT DATE = 9/14/2009	REVISED - T. RAMMACHER 01-06-00	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

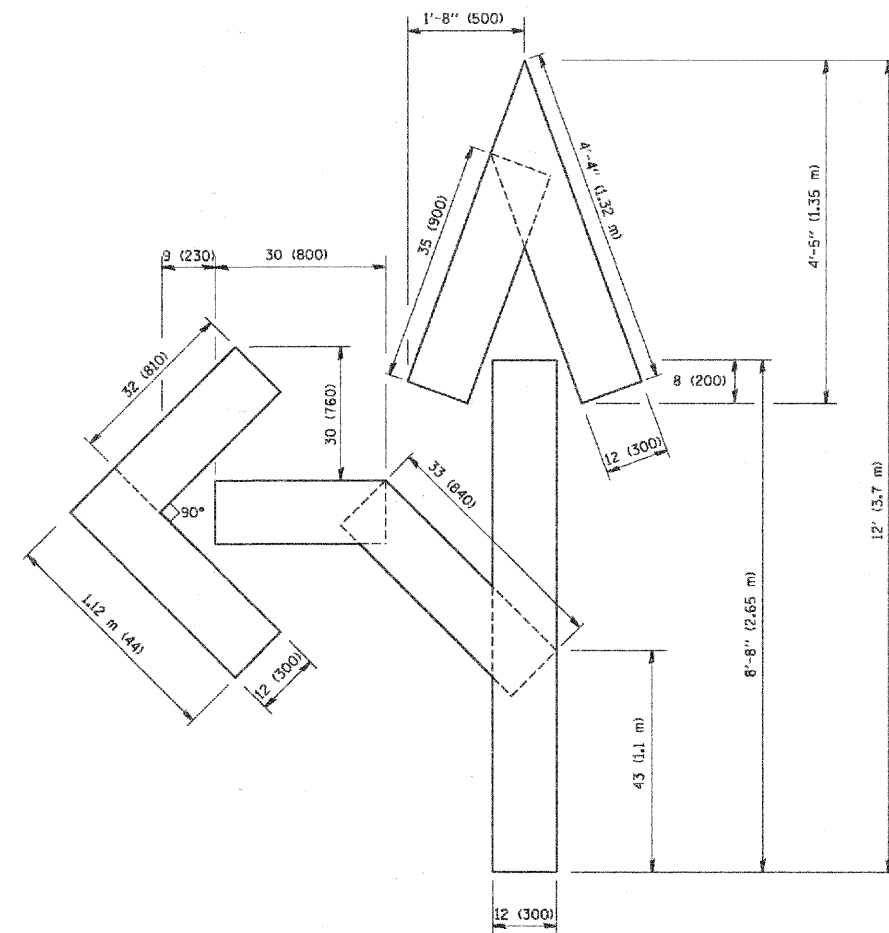
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

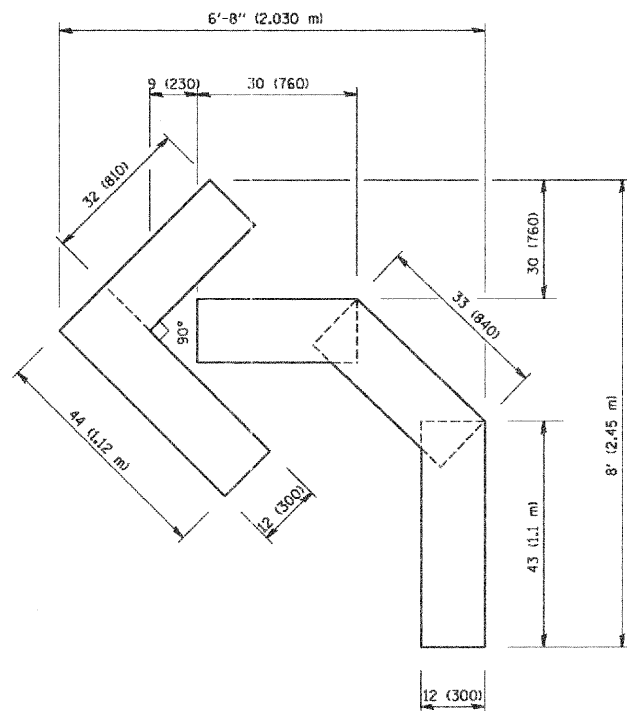
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	McHENRY	56	53
<b>TC-14</b>			CONTRACT NO. 63551	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



QUANTITY  
 4 (100) LINE = 64.1 ft. (19.7 m)  
 21.1 sq. ft. (1.97 sq. m)



QUANTITY  
 4 (100) LINE = 82.5 ft. (25.3 m)  
 27.5 sq. ft. (2.53 sq. m)



QUANTITY  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = W:\drtsttd\22x34\1616.dgn	USER NAME = goglienobt	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 1/4/2000	DATE = 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

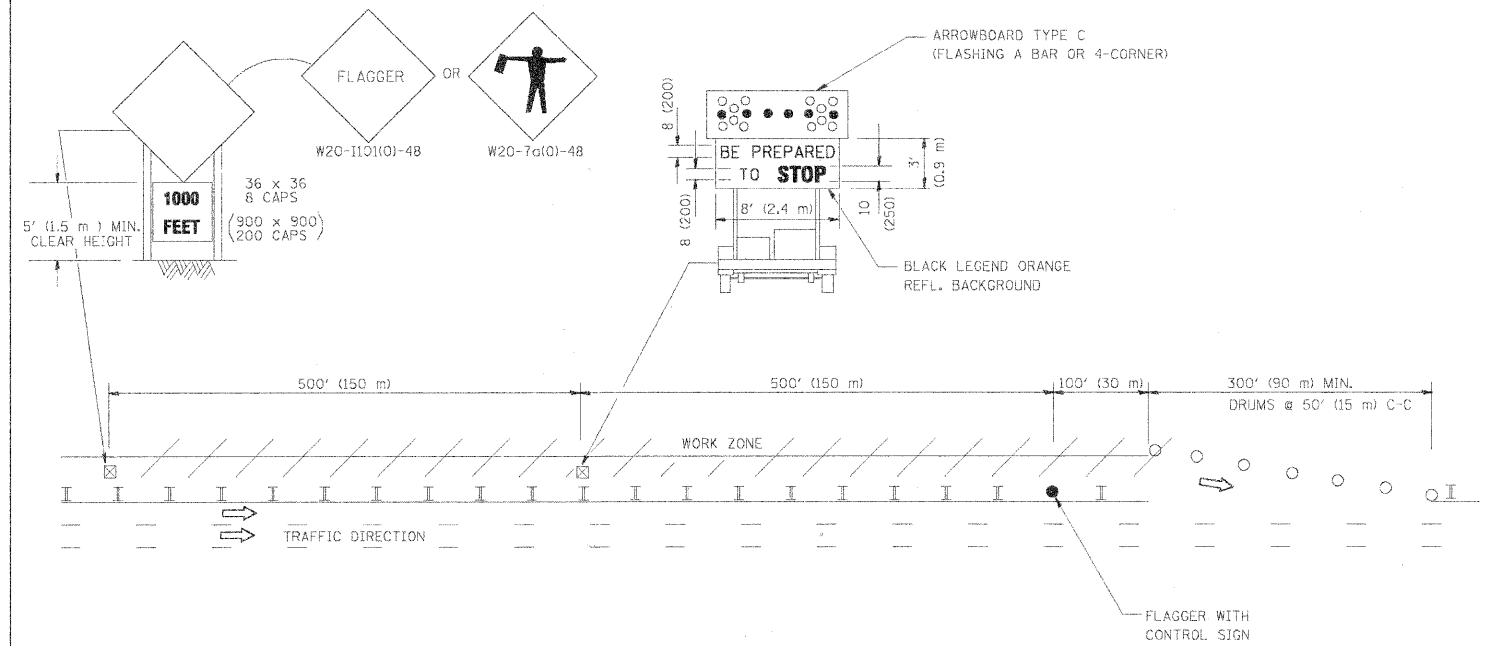
PAVEMENT MARKING LETTERS AND SYMBOLS  
 FOR TRAFFIC STAGING

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

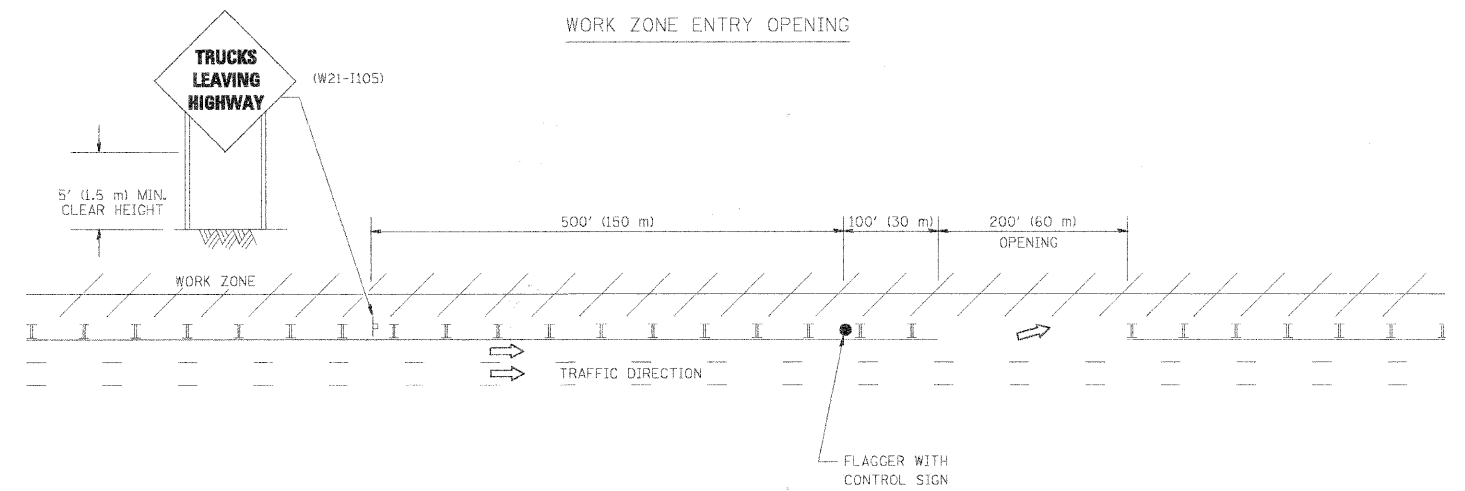
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335	11-00114-00-CH	MCHEMRY	56	54
TC-16			CONTRACT NO. 63551	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = W:\distd\22x34\1c18.dgn	USER NAME = lagoa	DESIGNED = DRAWN =	REVISED = REVISED = REVISED = REVISED =
			J.A.F. 04-03 J.A.F. 02-06 S.P.B. 01-07 S.P.B. 12-09
	PLOT SCALE = 50,000 "/ IN.	CHECKED = DATE =	
	PLOT DATE = 1/26/2010		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS  
AT WORK ZONE OPENINGS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 335	SECTION 11-00114-00-CH	COUNTY McHENRY	TOTAL SHEETS 56	SHEET NO. 55
TC-18		CONTRACT NO. 63551		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED  
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

**NOTES:**

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

FILE NAME = W:\distato\22x34\to26.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - C. JUCIUS 02-15-07
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
PLOT SCALE = 50.000' / IN.			
PLOT DATE = 1/4/2009			

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**DRIVEWAY ENTRANCE SIGNING**

SCALE: NONE    SHEET NO. 1 OF 1 SHEETS    STA.    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	11-00114-00-CH	MCHEMRY	56	56
<b>TC-26</b>			<b>CONTRACT NO. 63551</b>	
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				