

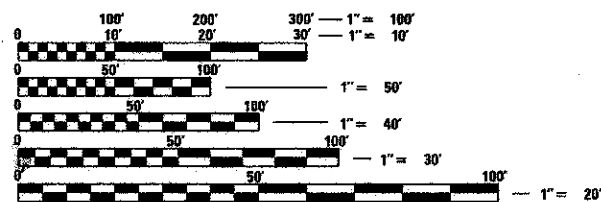
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HIGHWAY STANDARDS

000001 - 06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001 - 02	AREAS OF REINFORCEMENT BARS
542301 - 03	PRECAST REINFORCED CONCRETE FLARED END SECTION
601001 - 04	SUB-SURFACE DRAINS
602301 - 03	INLET - TYPE A
602401 - 03	MANHOLE TYPE A
602601 - 02	PRECAST REINFORCED CONCRETE FLAT TOP SLAB
602701 - 02	MANHOLE STEPS
604091 - 02	FRAME AND GRATE TYPE 24
635011 - 02	REFLECTOR MARKER AND MOUNTING DETAILS
701101 - 03	OFF-RD OPERATIONS MULTILANE, 15' (4.5 M) TO 24' (600mm) FROM PAVEMENT EDGE
701421 - 05	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS > 45 MPH TO 55 MPH
701426 - 05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS > 45 MPH
701431 - 08	LANE CLOSURE, MULTILANE, UNDIV. WITH CROSSOVER, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701606 - 08	URBAN LANE CLOSURE, MULTILANE, 2L, 2W WITH MOUNTABLE MEDIAN
701901 - 02	TRAFFIC CONTROL DEVICES
704001 - 07	TEMPORARY CONCRETE BARRIER

LCDOT HIGHWAY STANDARDS

LC 2050	TEMPORARY DITCH CHECK INSTALLATION FOR ROADWAY OR DRAINAGE DITCH
LC 2051	PERIMETER EROSION BARRIER INSTALLATION
LC 4202	CONCRETE WASHOUT FACILITIES
LC 4801	TRANSITION FROM AGGREGATE SHOULDER TO B-6.24 FOR 18' OFFSET TO FACE
LC 6020	SUB-SURFACE DRAINS
LC 6650	WITNESS POST
LC 7800	TYPICAL PAVEMENT MARKING FOR COUNTY HIGHWAYS



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

WITH THE FOLLOWING
COUNTY: LAKE
CITY-TOWNSHIP: GRAYSLAKE - AVON
SECTION AND 1/4 SECTION NO.: 14 SE 1/4
48 HOURS BEFORE YOU DIG
EXCLUDING SAT., SUN. AND HOLIDAYS
CONTRACT NO. 63807

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

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID PROJECT**

FAU ROUTE 181 (ROLLINS ROAD, COUNTY HIGHWAY A20)

MILLENNIUM TRAIL UNDERPASS

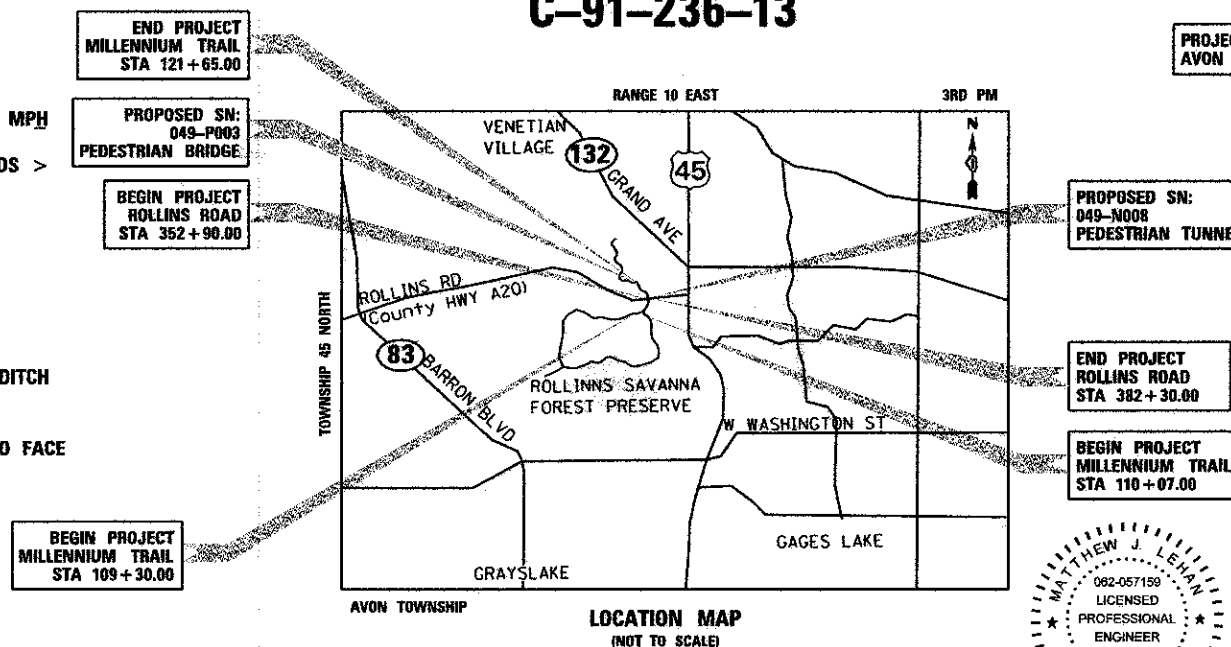
SECTION 12-F3000-01-BT

PROJECT NO. TE-00D1(910)

LAKE COUNTY FOREST PRESERVES DISTRICT

LAKE COUNTY

C-91-236-13



PROJECT LOCATED IN AVON TOWNSHIP

MATTHEW J. LEAN
082-057159
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
DATE: 4/5/2013
SEAL EXPIRES: 11/30/2013

BRETT W. SAUTER
081-008844
LICENSED STRUCTURAL ENGINEER OF ILLINOIS
DATE: 4/5/2013
SEAL EXPIRES: 11/30/2014

PROJECT LENGTH

C.H. A20 (ROLLINS ROAD) GROSS AND NET LENGTH = 2,940.00 FEET (0.56 MILES)
MILLENNIUM TRAIL GROSS AND NET LENGTH = 1,817.09 FEET (0.34 MILES)
TOTAL GROSS AND NET LENGTH = 4,757.09 FEET (0.90 MILES)

ROLLINS ROAD DESIGN INFORMATION

DESIGN DESIGNATION - MINOR ARTERIAL
DESIGN SPEED - 50 MPH POSTED SPEED - 45 MPH

ADT

ROLLINS ROAD 2011 ADT = 23,100 ADT

Ciorba Group, Inc.

DESIGN FIRM
REGISTRATION NUMBER
184-001016

CONSULTING ENGINEERS
SUITE 402, 5507 NORTH CUMBERLAND AVE
CHICAGO, ILLINOIS 60656 ☎ (773) 775-4009



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Approved: *[Signature]*
4/10/13
Lake County Forest Preserve District

Passed: April 10, 2013
[Signature]
District 1 Engineer of Local Roads & Streets

Releasing for Bid Based on Limited Review: April 10, 2013
[Signature]
District 1 Engineer of Highways, Region 1 Engineer

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OF THE STATE OF ILLINOIS**

GENERAL NOTES

GENERAL

1. ALL REFERENCES TO "ENGINEER" SHALL BE INTERPRETED TO MEAN THE RESIDENT ENGINEER.
2. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE DETAILS IN THE PLANS, THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS AND THE LATEST EDITION OF THE FOLLOWING STATE OF ILLINOIS SPECIFICATIONS: "THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (REFERRED TO AS THE "STANDARD SPECIFICATIONS"), THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", THE "MANUAL OF TEST PROCEDURES FOR MATERIALS" AND THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS". ANY REFERENCE TO "STANDARDS" THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST I.D.O.T. STANDARDS EFFECTIVE 1/1/2013.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, ILLINOIS DEPARTMENT OF TRANSPORTATION (847) 705-4487, LAKE COUNTY DIVISION OF TRANSPORTATION (847) 377-7400 AND THE LAKE COUNTY FOREST PRESERVE (847) 968-3277, 72 HOURS PRIOR TO THE COMMENCEMENT OF WORK.
4. NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS ARE MET TO THE SATISFACTION OF THE ENGINEER.
5. PROPOSED LINES AND GRADES SHOWN ON THE CONSTRUCTION PLANS REPRESENT FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL SAW CUT PAVEMENT AND CURB & GUTTER TO SEPARATE THE EXISTING MATERIAL TO BE REMOVED BY MEANS OF AN APPROVED SAW TO A DEPTH AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE REMOVAL ITEM INVOLVED. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE LAKE COUNTY FOREST PRESERVE DISTRICT, AN AUTHORIZED SURVEYOR OR ANY AGENT HAS WITNESSED OR OTHERWISE REFERENCED EACH LOCATION.
8. ALL DIMENSIONS, INCLUDING RADII, ARE GIVEN TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
9. SHOULD THE CONTRACTOR DESIRE TO OBTAIN WATER FOR CONSTRUCTION PURPOSES FROM THE LOCAL AREA, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING ARRANGEMENTS. LAKE COUNTY FOREST PRESERVE DISTRICT MAY INSTRUCT THE CONTRACTOR WHERE A POTABLE WATER SUPPLY FROM A HYDRANT NEAR THE WORK SITE IS LOCATED, THE CONTRACTOR IS RESPONSIBLE FOR THE TRANSPORTATION OF THE WATER TO THE SITE WHERE NEEDED. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
10. TEMPORARY TOILET - THE CONTRACTOR SHALL PROVIDE A TEMPORARY TOILET FACILITY FOR THE USE OF ALL CONTRACTORS' PERSONNEL EMPLOYED ON THE WORK, AND SHALL MAINTAIN SAME IN PROPER SANITARY CONDITION. AT COMPLETION, THE FACILITY SHALL BE REMOVED AND THE PREMISES LEFT CLEAN. THE ENGINEER SHALL APPROVE THE LOCATION OF THE TEMPORARY TOILET. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES BID AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
11. IN ADDITION TO THE REQUIREMENTS OF THE SPECIAL PROVISION FOR CONSTRUCTION LAYOUT STAKES (ILLINOIS DEPARTMENT OF TRANSPORTATION CHECK SHEET #10), THE CONTRACTOR SHALL REESTABLISH, MONUMENT, AND TIE ALL CONTROL POINTS USED TO COMPLETE THE WORK AS SPECIFIED INCLUDING ALL P.I.'S, P.C.'S, P.T.'S, AND P.O.T.'S. THE TYPE OF MONUMENTATION USED WILL BE PK NAILS, IRON PIPES, RR SPIKES OR AS APPROVED BY THE ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF "CONSTRUCTION LAYOUT".
12. WHEN REMOVING CURB AND GUTTER, PAVEMENT OR ANY OTHER STRUCTURE, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION NECESSARY TO ENSURE THAT THERE WILL BE NO DAMAGE TO UNDERGROUND PUBLIC OR PRIVATE UTILITIES. UNDER NO CIRCUMSTANCES WILL THE USE OF A FROST BALL CONCRETE BREAKER BE ALLOWED.
13. THE PROTECTIVE COATING SHALL BE APPLIED TO THE EXPOSED SURFACES OF THE PORTLAND CEMENT CONCRETE PAVEMENT, CONCRETE SIDEWALK, AND CONCRETE CURB AND GUTTER. PORTLAND CEMENT CONCRETE CURING SHALL BE LIMITED TO METHODS SPECIFIED IN ARTICLE 1020.13 (A) [1], [2] AND [3].
14. THE THICKNESSES OF HOT-MIX ASPHALT MIXTURES SHOWN ON THE PLANS ARE NOMINAL. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE BINDER OR BASE UPON WHICH THE HOT-MIX ASPHALT MATERIALS ARE PLACED.
15. CONCRETE WASHOUT FACILITY SHOULD BE PROVIDED IN THE FIELD BY THE CONTRACTOR. THE COST OF CONCRETE WASHOUT FACILITY SHALL BE INCLUDED IN THE COST OF THE CONCRETE WORK ITEMS INCLUDED IN THE CONTRACT. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
16. THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ARTICLE 201.01(G) OF THE STANDARD SPECIFICATIONS. REMOVAL OF ALL OBSTRUCTIONS IN THE RIGHT-OF-WAY, THAT ARE NOT INCLUDED IN A SPECIFIC REMOVAL ITEM, SHALL BE CONSIDERED CLEARING AND INCLUDED IN THE COST OF THE CONTRACT. THIS SHALL INCLUDE, BUT NOT LIMITED TO, FENCES, WALLS, FOUNDATIONS, BUILDINGS, ACCUMULATIONS OF RUBBISH OF WHATEVER NATURE, OLD TYPE III BARRICADES, OLD WATER HEATERS, OLD CMP PIPE, RUBBER TIRES, CONCRETE BLOCKS, DEADMEN, METAL PARTS, ABANDONED WOODEN POWER POLES, GATES, AND ALL VEGETATION, TREES, SHRUBS, ETC. LESS THAN 6" IN DIAMETER.
17. ALL EARTHWORK EXCAVATION IS TO BE REGRADED/PLACED ON SITE. THERE IS NO HAUL-OFF ANTICIPATED. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF "EARTH EXCAVATION", "TOPSOIL EXCAVATION AND PLACEMENT" AND "STRUCTURE EXCAVATION". SHOULD THE CONTRACTOR ENCOUNTER UNSUITABLE SOILS, THE REMOVAL SHALL BE PAID FOR AS "EARTH EXCAVATION".
18. THE CONTRACTOR IS ALERTED TO THE FACT THAT THE SOIL BORINGS INDICATE THE PRESENCE OF SAND AND SILT LAYERS BELOW THE STATIC GROUNDWATER ELEVATION OF 769 FEET. AGGRESSIVE DEWATERING UTILIZING WELL-POINTS, DEEP SUMPS, CUT-OFF WALLS OR OTHER MEANS MAY BE NECESSARY FOR DEEPER EXCAVATIONS. THE DEWATERING SHOULD BE ACCOMPLISHED PRIOR TO SOIL EXCAVATION. SOILS EXPOSED DURING EXCAVATION MAY LOSE BEARING STRENGTH AND STABILITY IF PERMITTED TO BECOME SATURATED. MUD SLABS, GRAVEL BLANKETS OR OTHER MEANS MAY BE REQUIRED TO STABILIZE THE BOTTOM OF EXCAVATIONS. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND CONSTRUCTING STABLE TEMPORARY EXCAVATIONS BY SHORING, SLOPING, BENCHING OR RESTRAINING THE SIDES OF EXCAVATIONS AS REQUIRED TO MAINTAIN STABILITY OF BOTH THE EXCAVATION SIDES AND BOTTOM. IF LOSS OF BEARING STRENGTH OR STABILITY OCCURS DUE TO THE CONTRACTOR NOT PROPERLY DESIGNING OR CONSTRUCTING THE EXCAVATION, THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE UNSUITABLE AND/OR UNSTABLE MATERIAL AND BACKFILL AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE CONTRACT. SEE GEOTECHNICAL INVESTIGATION REPORT FOR ADDITIONAL INFORMATION.
19. IF THE CONTRACTOR CHOOSES TO DISPOSE OF UNCONTAMINATED 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.
20. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES. THE LOCATION OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THE ENGINEER DOES NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR WILL BE REQUIRED TO ASCERTAIN THE EXACT LOCATION OF SUCH UTILITIES AND EXERCISE CARE DURING HIS CONSTRUCTION OPERATIONS SO AS NOT TO DAMAGE THEM IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND APPLICABLE ARTICLES INCLUDED IN THE "STANDARD SPECIFICATIONS" INCLUDING, BUT NOT LIMITED TO, ARTICLES 105.07 AND 107.31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL EXISTING UTILITIES SO THAT THEIR FACILITIES MAY BE LOCATED AND ADJUSTED OR MOVED, IF NECESSARY, PRIOR TO THE START OF THE CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR CONSTRUCTION STAGING NECESSARY TO ACCOMMODATE UTILITY RELOCATION OR ADJUSTMENT AND/OR FOR DELAYS CAUSED BY UTILITY RELOCATION OR ADJUSTMENT.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING LOCAL AGENCIES MAINTAINING STORM & SANITARY SEWERS AND WATER MAINS TO VERIFY THE MATERIALS AND METHODS ALLOWED FOR THE ADJUSTMENT OR RELOCATION OF THEIR FACILITIES, IF NECESSARY.
22. THE STATION/OFFSET/ELEVATIONS NOTED FOR ALL DRAINAGE STRUCTURES LOCATED IN THE CURB LINE REFER TO THE POSITION OF THE ADJACENT PROPOSED EDGE OF PAVEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE OFFSET NECESSARY FOR EACH STRUCTURE TO SET THE FRAME AND GRATE IN THE PROPER LOCATION. ALL OTHER STRUCTURES ARE DIMENSIONED TO THE CENTER OF STRUCTURE.
23. FRAME ELEVATIONS GIVEN ON THE PLANS ARE ONLY TO ASSIST THE CONTRACTOR IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. THE ADJUSTMENT OF FRAMES ON ALL NEW STRUCTURES TO THE FINAL ELEVATIONS SHALL BE INCLUDED IN THE COST OF THE NEW STRUCTURES. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
24. THE CONTRACTOR SHALL MAINTAIN FLOWS THROUGH EXISTING SEWER SYSTEMS AT ALL TIMES. THE EXISTING STRUCTURES SHALL BE INSPECTED BEFORE CONSTRUCTION STARTS. AS DIRECTED BY THE ENGINEER, ANY ACCUMULATION OF MATERIAL IN THE STRUCTURE DUE TO CONSTRUCTION OPERATIONS SHALL BE REMOVED BY THE CONTRACTOR AT HIS EXPENSE. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
25. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS OR STRUCTURES. HE SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS, AND DISCHARGE THE SAME. HE SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET. HE SHALL BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH SEWERS ARE BUILT AND IN SERVICE. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
26. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIAL NECESSARY FOR DEWATERING TRENCH EXCAVATIONS AS WELL AS SHORING TRENCH WALLS DURING UTILITY OPERATIONS. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
27. ANY PAVEMENT REMOVED AS PART OF UTILITY INSTALLATIONS SHALL BE REPLACED WITH PERMANENT PAVEMENT. TEMPORARY STONE SURFACE WILL NOT BE PERMITTED TO REMAIN OVERNIGHT WITHIN THE LIMITS OF LIVE TRAFFIC LANES. TEMPORARY HOT-MIX ASPHALT PATCHING AT THE CONTRACTOR'S EXPENSE MAY BE USED IN LIEU OF IMMEDIATE PAVEMENT REPLACEMENT. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
28. ALL FRAMES WITH CLOSED LIDS TO BE FURNISHED AS PART OF THIS CONTRACT FOR CONSTRUCTION, ADJUSTMENT OR RECONSTRUCTION OF ANY MANHOLES, CATCH BASIN, INLET, VALVE VAULT, OR METER VAULT SHALL HAVE CAST INTO THE LID ONE OF THE FOLLOWING WORDS: ALL LIDS TO BE USED ON STORM SEWER STRUCTURES SHALL BEAR THE WORD "STORM". ALL LIDS TO BE USED ON SANITARY SEWER STRUCTURES SHALL BEAR THE WORD "SANITARY". ALL LIDS TO BE USED ON WATER SYSTEM STRUCTURES SHALL BEAR THE WORD "WATER". ALL OPEN GRATES SHALL INCLUDE THE WORDING "DUMP NO WASTE, DRAINS TO WATERWAYS". THIS WORK SHALL BE CONSIDERED INCLUDED IN THE COST OF THE STRUCTURE BEING CONSTRUCTED, ADJUSTED OR RECONSTRUCTED. THE COST OF ALL MATERIALS REQUIRED AND ALL LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
29. THE CONTRACTOR SHALL BE AWARE THAT AT TIMES THE ENGINEER MAY REQUIRE A CHANGE IN STORM SEWER ELEVATION DUE TO A UTILITY LINE OR OTHER OBSTRUCTION. IF SUCH A GRADE CHANGE DOES NOT ALTER THE PIPE CLASSIFICATION, THE ADDITIONAL EXCAVATION OR SHEETING REQUIRED SHALL BE CONSIDERED AS INCLUDED IN THE COST OF THE STORM SEWER. HOWEVER, IF THE REVISED GRADE RESULTS IN A CHANGE IN PIPE CLASSIFICATION, PAYMENT WILL BE FOR THE REVISED TYPE OF STORM SEWER.
30. FOR STORM SEWER CONSTRUCTED UNDER THE ROADWAY, BACKFILLING METHODS TWO AND THREE AUTHORIZED UNDER THE PROVISIONS OF ARTICLE 550.07 WILL NOT BE ALLOWED.
31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A DEWATERING PLAN IN COMPLIANCE WITH NPDES REGULATIONS AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF "DEWATERING".
32. IF THE CONTRACTOR CHOOSES TO DISPOSE OF UNCONTAMINATED 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.

STORM SEWERS, STRUCTURES AND UTILITIES

MILLENNIUM TRAIL LAKE COUNTY FOREST PRESERVES

GENERAL NOTES ROLLINS ROAD UNDERPASS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	2
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. OF SHEETS STA. TO STA.

FILE NAME: N:\PROJ\2013\20130827\2013_RollinsRoadDesign\Draw_Sheets\20130827_01-general.dwg

CC Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

USER NAME * jkja11man	DESIGNED -	REVISED -
PLOT SCALE * 2.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE * 4/8/2013	CHECKED -	REVISED -
	DATE - 4/8/2013	REVISED -

GENERAL NOTES

LAKE COUNTY SMC

SEDIMENTATION AND EROSION CONTROL NOTES

TREE REMOVAL, CLEARING AND HEDGE REMOVAL

- 34. ALL TREES ARE DESIGNATED TO BE SAVED UNLESS OTHERWISE NOTED ON THE PLANS, AND SHALL BE PROTECTED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 201 OF THE STANDARD SPECIFICATIONS.

SIGNING, STRIPING AND LANDSCAPING

- 35. THE CONTRACTOR WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE SIGNS WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS, AND TO TEMPORARILY RESET OR STORE ALL SUCH SIGNS DURING CONSTRUCTION OPERATIONS. THIS WORK WILL BE INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT'S TRAFFIC CONTROL ITEMS.
- 36. ANY SIGNS WHICH ARE DAMAGED BEYOND BY THE CONTRACTOR REPAIR DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED IN KIND BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CONTRACT.
- 37. WHEN DIRECTED BY THE ENGINEER, SUPPLEMENTAL WATERING SHALL BE APPLIED TO ALL SEEDED AREAS PRIOR TO FINAL ACCEPTANCE AT A RATE SPECIFIED BY THE ENGINEER AND IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS" AND SPECIAL PROVISIONS.
- 38. THE CONTRACTOR SHALL ADHERE TO LIMITS OF RESTORATION SHOWN. AREAS OUTSIDE THESE LIMITS THAT ARE DAMAGED OR DISTURBED BY THE CONTRACTOR, SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

- A. 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.
- B. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- C. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 14 CALENDAR DAYS OF THE END OF ACTIVE HYDROLOGIC DISTURBANCE, OR REDISTURBANCE.
- D. AREAS OR ENBANKMENTS HAVING SLOPES GREATER THAN OR EQUAL TO 3H:1V, AND APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE STABILIZED WITH SOD, MAT OR BLANKET IN COMBINATION WITH SEEDING.
- E. EROSION CONTROL BLANKET SHALL BE REQUIRED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN NORMAL WATER LEVEL AND HIGH WATER LEVEL.
- F. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED, BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- G. 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.
- H. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.
- I. A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURE) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA. 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.
- J. 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 LAKE COUNTY.
- K. 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, OR OTHER APPROPRIATE MEASURE).
- L. 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.

POINTS OF CONTACT

LAKE COUNTY FOREST PRESERVE DISTRICT
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LAKE COUNTY DIVISION OF TRANSPORTATION
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PRINCIPAL CIVIL ENGINEER
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MS. TERRI BLECK
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NORTH SHORE GAS COMPANY
MR. JAY HAMMER
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MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES

GENERAL NOTES
ROLLINS ROAD UNDERPASS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	3
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. OF SHEETS STA. TO STA.

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Ciorba Group, Inc.
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5507 North Cumberland Avenue, Suite 402
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USER NAME = jk.jelmen	DESIGNED -	REVISED -
PLOT SCALE = 2,0000 ' / in.	DRAWN -	REVISED -
PLOT DATE = 4/8/2013	CHECKED -	REVISED -
	DATE - 4/8/2013	REVISED -

CODED PAY ITEM *	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0028 PEDESTRIAN FACILITIES
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	1,150	1,150
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	668	668
20101000	TEMPORARY FENCE	FOOT	1,530	1,530
20101100	TREE TRUNK PROTECTION	EACH	25	25
* 20101200	TREE ROOT PRUNING	EACH	4	4
* 20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	4	4
* 20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	10	10
20200100	EARTH EXCAVATION	CU YD	24,596	24,596
20700220	POROUS GRANULAR EMBANKMENT	CU YD	6,567	6,567
20800150	TRENCH BACKFILL	CU YD	62	62
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	1,562	1,562
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	2,904	2,904
* 21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	13,415	13,415
21301052	EXPLORATION TRENCH 52" DEPTH	FOOT	68	68
* 25000210	SEEDING, CLASS 2A	ACRE	0.75	0.75
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	698	698
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	810	810
* 25100630	EROSION CONTROL BLANKET	SQ YD	37,510	37,510
* 25200200	SUPPLEMENTAL WATERING	UNIT	330	330
* 28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	900	900
28000305	TEMPORARY DITCH CHECKS	FOOT	570	570
28000400	PERIMETER EROSION BARRIER	FOOT	9,320	9,320
28000500	INLET AND PIPE PROTECTION	EACH	6	6
28100101	STONE RIPRAP, CLASS A1	SQ YD	42	42

* SPECIALTY ITEMS

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PLOT DATE: 4/8/2013	CHECKED: -	REVISED: -
	DATE: 4/8/2013	REVISED: -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

SUMMARY OF QUANTITIES	
ROLLINS ROAD UNDERPASS	
SCALE:	SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RYE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	4
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

CODED PAY ITEM #	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0028 PEDESTRIAN FACILITIES
28100203	STONE RIPRAP, CLASS A2	TON	523	523
28200200	FILTER FABRIC	SQ YD	42	42
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	1,256	1,256
35101500	AGGREGATE BASE COURSE, TYPE B	CU YD	89	89
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	2,282	2,282
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2,800	2,800
40600300	AGGREGATE (PRIME COAT)	TON	41	41
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	84	84
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	256	256
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	2,172	2,172
40701921	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12"	SQ YD	1,076	1,076
42001300	PROTECTIVE COAT	SQ YD	199	199
44000100	PAVEMENT REMOVAL	SQ YD	2,417	2,417
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	19,389	19,389
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	703	703
44004250	PAVED SHOULDER REMOVAL	SQ YD	390	390
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	1,288	1,288
48203013	HOT-MIX ASPHALT SHOULDERS, 4"	SQ YD	313	313
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	3	3
50300225	CONCRETE STRUCTURES	CU YD	742.6	742.6
50300254	RUBBED FINISH	SQ FT	5,227	5,227
50700105	TREATED TIMBER	F.B.M.	4,610	4,610
50700305	HARDWARE	POUND	260	260
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	94,700	94,700

• SPECIALTY ITEMS

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PLOT DATE = 4/8/2013	DATE = 4/8/2013	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**SUMMARY OF QUANTITIES
ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	5
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 63807	

CODED PAY ITEM *	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0028 PEDESTRIAN FACILITIES
50800515	BAR SPLICERS	EACH	123	123
51500100	NAME PLATES	EACH	1	1
542A0217	PIPE CULVERTS, CLASS A, TYPE 1 12"	FOOT	23	23
542D0217	PIPE CULVERTS, CLASS D, TYPE 1 12"	FOOT	46	46
5421A012	PIPE CULVERTS, CLASS A, TYPE 1 12" (TEMPORARY)	FOOT	24	24
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	6	6
54215547	METAL END SECTIONS 12"	EACH	2	2
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	182	182
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	57	57
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	146	146
550A0360	STORM SEWERS, CLASS A, TYPE 2 15"	FOOT	8	8
55100500	STORM SEWER REMOVAL 12"	FOOT	211	211
55100700	STORM SEWER REMOVAL 15"	FOOT	211	211
58000100	MEMBRANE WATERPROOFING	SQ FT	2,875	2,875
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	524	524
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	1	1
60100905	PIPE DRAINS 4"	FOOT	200	200
60100915	PIPE DRAINS 6"	FOOT	518	518
60107700	PIPE UNDERDRAINS 6"	FOOT	318	318
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	3	3
60237470	INLETS, TYPE A, TYPE 24 FRAME AND GRATE	EACH	4	4
60500040	REMOVING MANHOLES	EACH	2	2
60500060	REMOVING INLETS	EACH	4	4
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	714	714

* SPECIALTY ITEMS

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	DATE: 4/8/2013	REVISED: -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

SUMMARY OF QUANTITIES ROLLINS ROAD UNDERPASS			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	6
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	

CODED PAY ITEM #	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0028 PEDESTRIAN FACILITIES
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10	10
67100100	MOBILIZATION	L SUM	1	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	16	16
70300100	SHORT TERM PAVEMENT MARKING	FOOT	3,300	3,300
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	6,563	6,563
70400100	TEMPORARY CONCRETE BARRIER	FOOT	317	317
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	317	317
* 70500100	TEMPORARY STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	1,337.5	1,337.5
* 70500615	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2	2
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	19,400	19,400
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	269	269
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	505	505
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	152	152
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	18	18
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	16	16
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2
78300100	PAVEMENT MARKING REMOVAL	SQ FT	7,062	7,062
* 78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	152	152
* 80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	1
* 80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1	1
* 81028170	UNDERGROUND CONDUIT, GALVANIZED STEEL, 1" DIA.	FOOT	75	75
* 81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	697	697

• SPECIALTY ITEMS

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 Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60658 Tel. 773.775.4009 Fax 773.775.4014	USER NAME = kjellman PLOT SCALE = 2.0000" = 1" PLOT DATE = 4/8/2013	DESIGNED - DRAWN - CHECKED - DATE = 4/8/2013	REVISED - REVISED - REVISED - REVISED -	MILLENNIUM TRAIL LAKE COUNTY FOREST PRESERVES	SUMMARY OF QUANTITIES ROLLINS ROAD UNDERPASS	F.A.I. RTE. 181	SECTION 12-F3000-01-BT	COUNTY LAKE	TOTAL SHEETS 118	SHEET NO. 7	CONTRACT NO. 63807
	SCALE:	SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								

CODED PAY ITEM #	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0028 PEDESTRIAN FACILITIES
81200100	CONDUIT EMBEDDED IN STRUCTURE, 1" DIA., GALVANIZED STEEL	FOOT	255	255
81300980	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 8" X 8" X 6"	EACH	2	2
81400100	HANDHOLE	EACH	1	1
81400200	HEAVY-DUTY HANDHOLE	EACH	2	2
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1,170	1,170
81702150	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2	FOOT	220	220
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1
89502380	REMOVE EXISTING HANDHOLE	EACH	3	3
A2C020G5	TREE, CARYA CORDIFORMIS (BITTERNUT HICKORY), CONTAINER GROWN, 5-GALLON	EACH	50	50
A2C36G15	TREE, QUERCUS MACROCARPA (BURR OAK), CONTAINER GROWN, 15-GALLON (ROOT PRODUCTION METHOD), SPECIAL	EACH	150	150
A2006414	TREE, QUERCUS ALBA (WHITE OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	50	50
A2007114	TREE, QUERCUS RUBRA (RED OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	50	50
A2016614	TREE, QUERCUS ELLIPSOIDALIS (HILL'S OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	50	50
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	1,893	1,893
X0325689	REMOVAL OF EXISTING TIMBER MEMBERS	L SUM	1	1
X0426200	DEWATERING	L SUM	1	1
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.50	0.50
X2501100	SEEDING, CLASS 3 (SPECIAL)	ACRE	6.5	6.5
X2810108	STONE RIPRAP, CLASS A4 (SPECIAL)	SO YD	94	94
X4020900	AGGREGATE SURFACE COURSE, TYPE B SPECIAL	SO YD	578	578
X5020200	STRUCTURE EXCAVATION (SPECIAL)	CU YD	8,826	8,826
X6022240	MANHOLES, TYPE A, 4'-DIAMETER, WITH SPECIAL FRAME, CLOSED LID	EACH	2	2
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
X7030030	WET REFLECTIVE TEMPORARY TAPE TYPE III, 4 INCH	FOOT	19,688	19,688

• SPECIALTY ITEMS

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	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

SUMMARY OF QUANTITIES ROLLINS ROAD UNDERPASS				
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

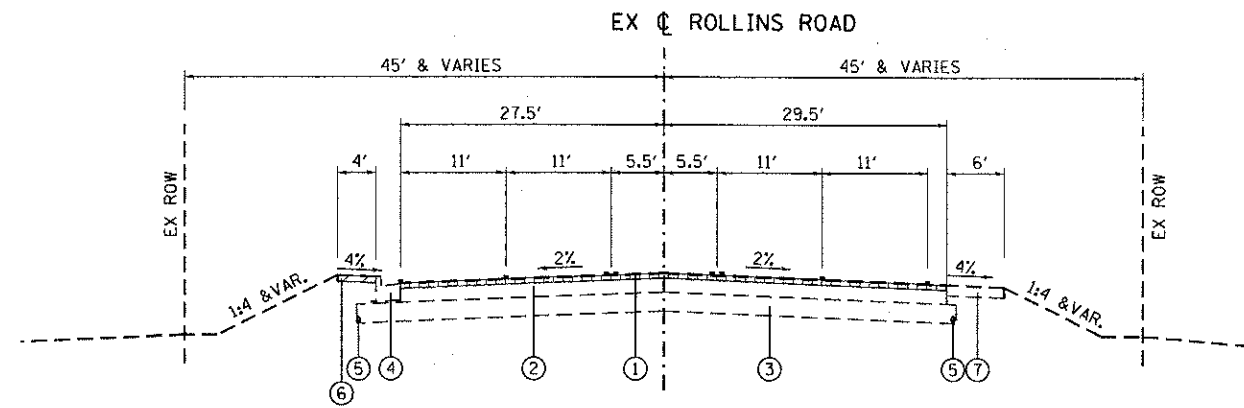
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	8
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	

CODED PAY ITEM #	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0028 PEDESTRIAN FACILITIES
* X8140215	HEAVY-DUTY HANDHOLE TO BE ADJUSTED	EACH	2	2
* X8250505	LIGHTING CONTROLLER, SPECIAL	EACH	1	1
XX003668	PRECONSTRUCTION VIDEO TAPING	L SUM	1	1
* XX005713	ORNAMENTAL RAILING	FOOT	145	145
XX006658	FLOCCULATION LOGS	EACH	20	20
XX006659	FLOCCULATION POWDER	POUND	153	153
* XX007017	TERMINATE FIBER IN CABINET	EACH	3	3
XX007023	STAINING CONCRETE STRUCTURES	SQ YD	247	247
* XX007797	LUMINAIRE (SPECIAL)	EACH	12	12
XX008003	FORM LINER TEXTURED SURFACE, SPECIAL	SQ FT	2,215	2,215
* XX008251	SPLICE FIBER IN CABINET	EACH	21	21
Z0013797	STABILIZED CONSTRUCTION ENTRANCE	SQ YD	218	218
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
Z0019600	DUST CONTROL WATERING	UNIT	165	165
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	52	52
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	695	695
Z0062456	TEMPORARY PAVEMENT	SQ YD	1,341	1,341
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	2,526	2,526
△ Z0076600	TRAINEES	HOUR	500	500
△ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500
XX006522	FURNISH WITNESS POST	EACH	8	8
XX0088165	PERMEABLE PLASTIC BERM	FOOT	570	570
* XX0088166	UNDERGROUND CONDUIT, PVC COATED GALVANIZED STEEL, 2 1/2" DIA.	FOOT	25	25

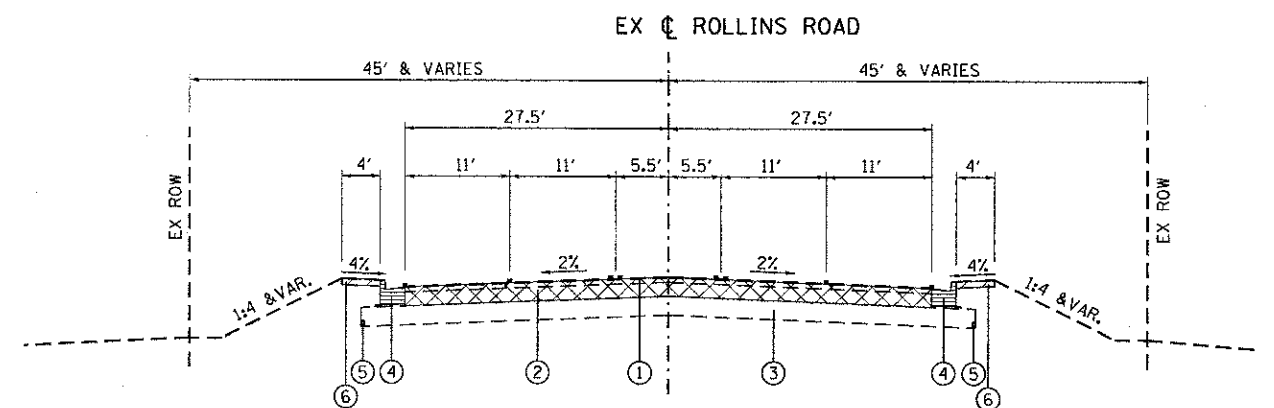
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△ CONSTRUCTION TYPE CODE 0042

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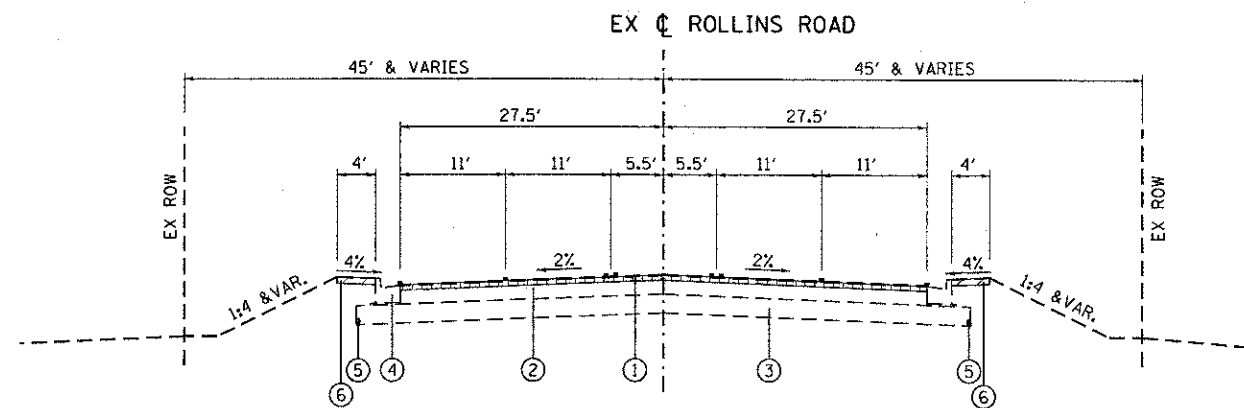
 Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60658 Tel. 773.775.4000 Fax 773.775.4014	USER NAME: * jkellman DESIGNED: - DRAWN: - CHECKED: - DATE: 4/8/2013	REVISED: - REVISED: - REVISED: - REVISED: -	MILLENNIUM TRAIL LAKE COUNTY FOREST PRESERVES	SUMMARY OF QUANTITIES ROLLINS ROAD UNDERPASS				F.A.I.L. RTE.: 181 SECTION: 12-F3000-01-B7 COUNTY: LAKE TOTAL SHEETS: 118 SHEET NO.: 9
	PLOT SCALE: * 2,0000' / in. PLOT DATE: * 4/8/2013	SCALE: SHEET NO. OF SHEETS STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	CONTRACT NO. 63807			



EXISTING TYPICAL SECTION
STA 352+90.00 TO STA 367+29.00 - ROLLINS RD.



EXISTING TYPICAL SECTION
STA 367+29.00 TO STA 369+05.00 - ROLLINS RD.



EXISTING TYPICAL SECTION
STA 369+05.00 TO STA 382+30.00 - ROLLINS RD.

- EXISTING LEGEND**
- ① HOT-MIX ASPHALT SURFACE COURSE, 2" +/-
 - ② HOT-MIX ASPHALT BINDER COURSE, 10" +/-
 - ③ AGGREGATE SUB-BASE, 12" +/-
 - ④ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
 - ⑤ PIPE UNDERDRAIN 4"
 - ⑥ HOT-MIX ASPHALT SHOULDER, 4" +/-
 - ⑦ AGGREGATE SHOULDER, 6" +/-
 - ⊗ PAVEMENT REMOVAL
 - ▨ PAVED SHOULDER REMOVAL
 - ▤ HOT-MIX ASPHALT SURFACE REMOVAL, 2"
 - ▥ COMBINATION CURB AND GUTTER REMOVAL

- PROPOSED LEGEND**
- (A) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12" (2" SURFACE, 10" BINDER)
 - (B) AGGREGATE SUBGRADE IMPROVEMENT, 12"
 - (C) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
 - (D) PIPE UNDERDRAIN 4"
 - (E) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 3"
 - (F) AGGREGATE BASE COURSE, TYPE B, 6"
 - (G) GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
 - (H) TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM)
 - (I) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
 - (J) HOT-MIX ASPHALT SHOULDER, 4"
 - (K) AGGREGATE SHOULDER TYPE B, 6"
 - (L) AGGREGATE SURFACE COURSE, TYPE B SPECIAL (5" CA-6 OVER 3" FA-21)

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	DATE -	REVISED -

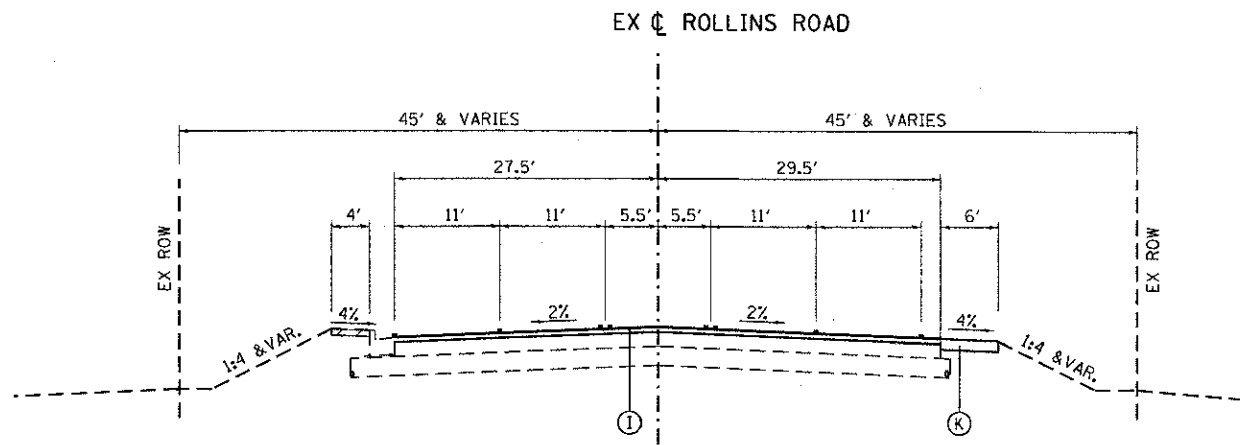
**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**TYPICAL SECTIONS
ROLLINS ROAD UNDERPASS**

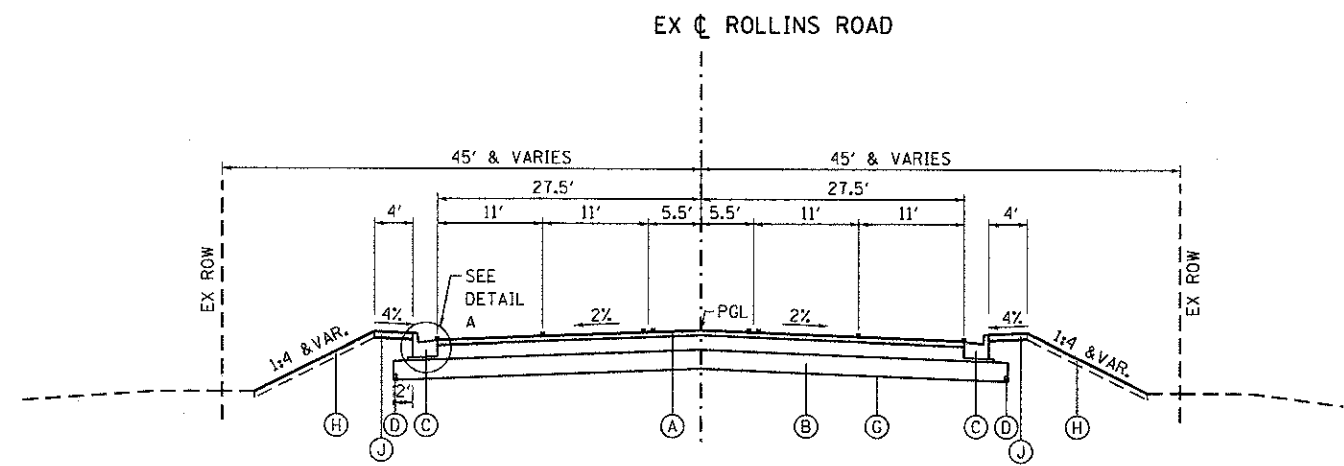
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	10
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

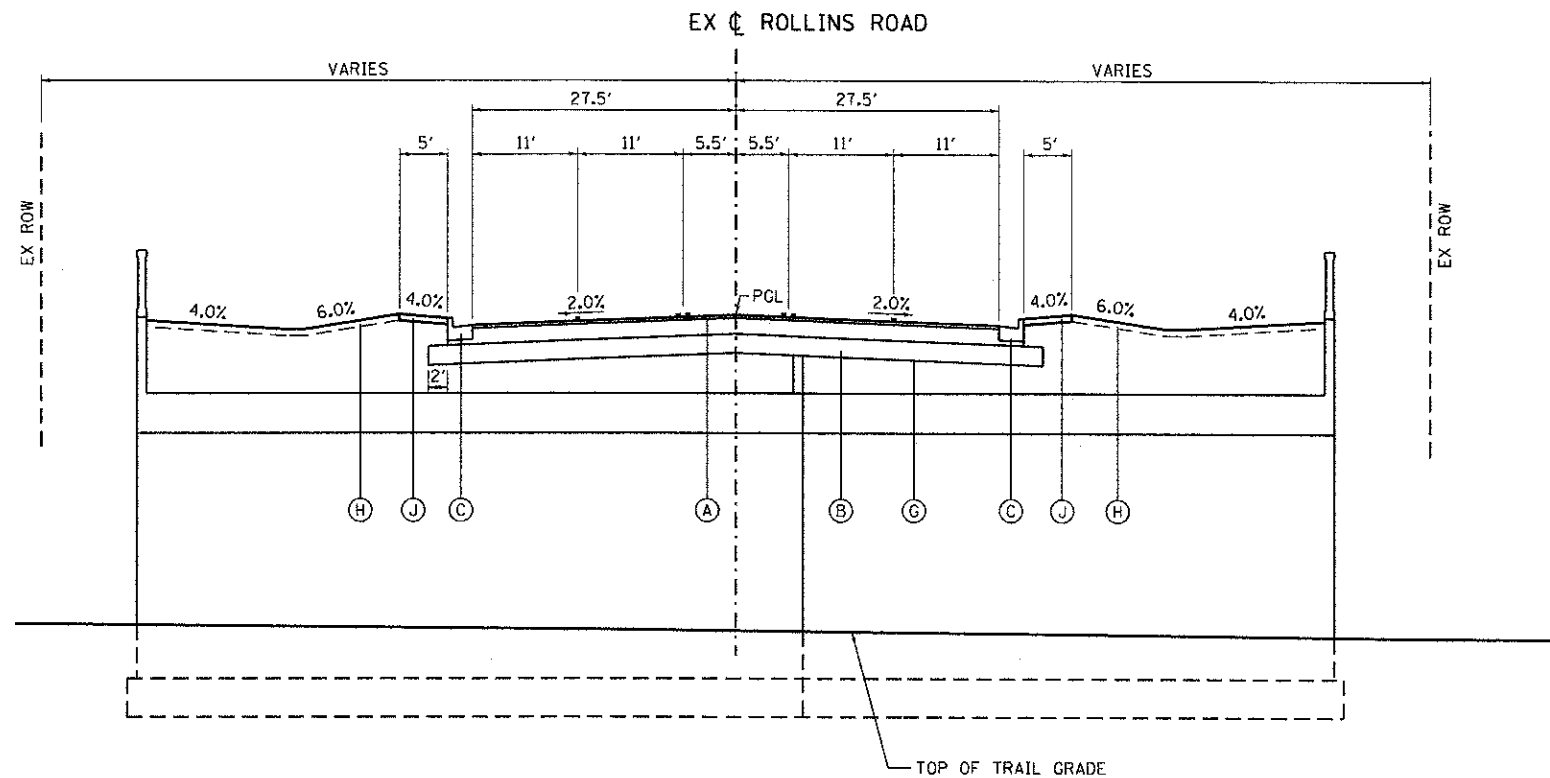
CONTRACT NO. 63807



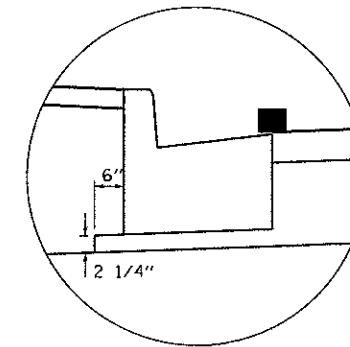
PROPOSED TYPICAL SECTION
STA 352+90.00 TO STA 367+29.00 - ROLLINS RD



PROPOSED TYPICAL SECTION
STA 367+29.00 TO STA 368+00.75 - ROLLINS RD
STA 368+21.25 TO STA 369+05.00 - ROLLINS RD



PROPOSED TYPICAL SECTION AT UNDERPASS
STA 368+00.75 TO STA 368+21.25 - ROLLINS RD



DETAIL A

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

OPERATION	MIXTURE TYPE	AIR VOIDS @ Ndes
ROADWAY RECONSTRUCTION	HOT-MIX ASPHALT PAVEMENT, (FULL DEPTH), 12" HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5mm), 2" HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 10" (IN 3 LIFTS)	4% @ 70 Gyr. 4% @ 70 Gyr.
BIKE PATH MILLENNIUM TRAIL	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5 mm), 3"	4% @ 50 Gyr.
TEMPORARY PAVEMENT, 8"	TEMP PAVEMENT (HMA BINDER COURSE, IL 19.0 mm), 8" (IN 3 LIFTS)	
ROADWAY RESURFACING	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5), 2"	4% @ 70 Gyr.
SHOULDER STABILIZATION	HOT-MIX ASPHALT SHOULDERS, 4" HOT-MIX ASPHALT SHOULDER (HMA BINDER IL-19mm), 4"	4% @ 50 Gyr.

NOTE:

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE IS 112 LBS/SQYD/IN.
THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" 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 SPECIAL PROVISIONS.
PC CONCRETE TEMPORARY PAVEMENT SHALL CONSIST OF CLASS PV CONCRETE MEETING THE REQUIREMENTS OF ART. 1020 OF THE STANDARD SPECIFICATIONS.

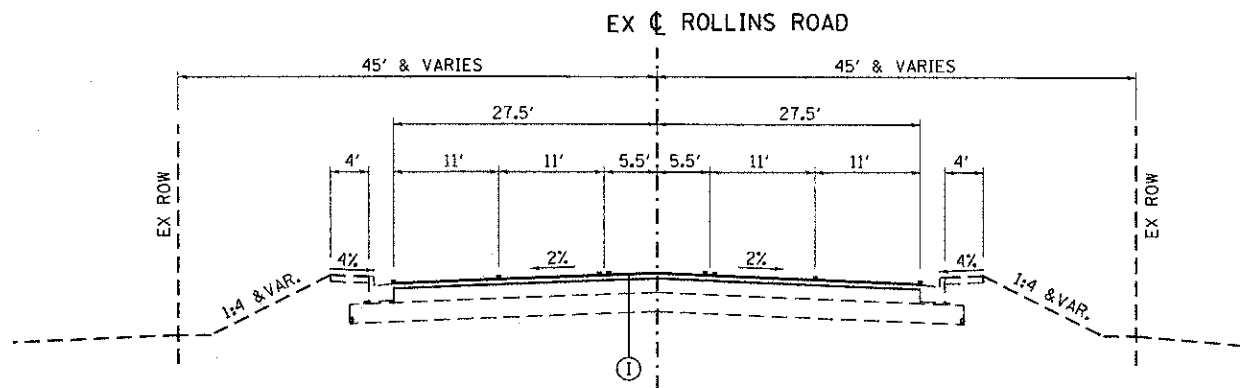
EXISTING LEGEND

- ① HOT-MIX ASPHALT SURFACE COURSE, 2" +/-
- ② HOT-MIX ASPHALT BINDER COURSE, 10" +/-
- ③ AGGREGATE SUB-BASE, 12" +/-
- ④ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- ⑤ PIPE UNDERDRAIN 4"
- ⑥ HOT-MIX ASPHALT SHOULDER, 4" +/-
- ⑦ AGGREGATE SHOULDER, 6" +/-
- ⊗ PAVEMENT REMOVAL
- ▨ PAVED SHOULDER REMOVAL
- ▤ HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- ▥ COMBINATION CURB AND GUTTER REMOVAL

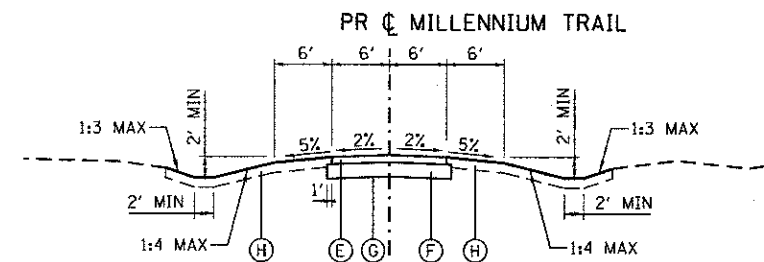
PROPOSED LEGEND

- Ⓐ HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12" (2" SURFACE, 10" BINDER)
- Ⓑ AGGREGATE SUBGRADE IMPROVEMENT, 12"
- Ⓒ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- Ⓓ PIPE UNDERDRAIN 4"
- Ⓔ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 3"
- Ⓕ AGGREGATE BASE COURSE, TYPE B, 6"
- Ⓖ GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
- Ⓗ TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM)
- Ⓘ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
- Ⓙ HOT-MIX ASPHALT SHOULDER, 4"
- Ⓚ AGGREGATE SHOULDER TYPE B, 6"
- Ⓛ AGGREGATE SURFACE COURSE, TYPE B SPECIAL (5" CA-6 OVER 3" FA-21)

FILE NAME: h:\p\proj\022003\701\1_Rollins\Design\Typical\Sections\022003\01-Typical.dwg

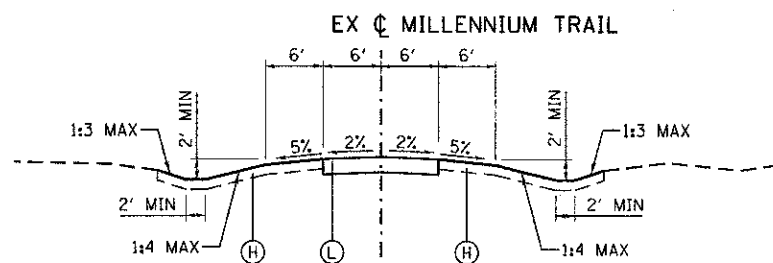


PROPOSED TYPICAL SECTION
STA 369+05.00 TO STA 382+30.00 - ROLLINS RD



PROPOSED TYPICAL SECTION
STA 110+29.90 TO STA 121+17.30 - MILLENNIUM TRAIL

NOTE:
BRIDGE OMISSION FROM STA 121+17.30 TO STA 121+49.73.
BUTT JOINT AND HMA TAPER FROM STA 121+49.73 TO 121+65.00
SEE DISTRICT 1 STANDARD BD-32



PROPOSED TYPICAL SECTION
STA 309+30.00 TO STA 313+36.01 - MILLENNIUM TRAIL

EXISTING LEGEND

- ① HOT-MIX ASPHALT SURFACE COURSE, 2" +/-
- ② HOT-MIX ASPHALT BINDER COURSE, 10" +/-
- ③ AGGREGATE SUB-BASE, 12" +/-
- ④ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- ⑤ PIPE UNDERDRAIN 4"
- ⑥ HOT-MIX ASPHALT SHOULDER, 4" +/-
- ⑦ AGGREGATE SHOULDER, 6" +/-
- ⊗ PAVEMENT REMOVAL
- ▨ PAVED SHOULDER REMOVAL
- ▤ HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- ▥ COMBINATION CURB AND GUTTER REMOVAL

PROPOSED LEGEND

- Ⓐ HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12" (2" SURFACE, 10" BINDER)
- Ⓑ AGGREGATE SUBGRADE IMPROVEMENT, 12"
- Ⓒ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- Ⓓ PIPE UNDERDRAIN 4"
- Ⓔ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 3"
- Ⓕ AGGREGATE BASE COURSE, TYPE B, 6"
- Ⓖ GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
- Ⓗ TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM)
- Ⓘ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
- Ⓝ HOT-MIX ASPHALT SHOULDER, 4"
- Ⓚ AGGREGATE SHOULDER TYPE B, 6"
- Ⓛ AGGREGATE SURFACE COURSE, TYPE B SPECIAL (5" CA-6 OVER 3" FA-21)

FILE NAME = N:\PROJECTS\0820807\01_V-Rollins\Design\Typical Sections\0820807_01_Typical01.dgn



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CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4000 Fax 773.775.4014

USER NAME = jk.jallman	DESIGNED -	REVISED -
PLOT SCALE = 20,0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 4/8/2013	CHECKED -	REVISED -
	DATE -	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**TYPICAL SECTIONS
ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	12
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	

SCHEDULE OF EARTH QUANTITIES - ROLLINS ROAD (PRE-STAGE)										
STATION	AREA (SQ FT)				VOLUME (CU YD)					
	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EMBANKMENT	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EARTH EX (15% SHRINKAGE)	EMBANKMENT	
357+41.00	0.0	0.0	0.0	0.0	0.0	0.6	4.6	3.9	0.0	
358+50.00	0.0	0.3	2.3	0.0	1.6	0.8	4.4	3.7	1.3	
359+00.00	1.7	0.6	2.4	1.4	4.3	1.6	4.4	3.7	3.9	
359+50.00	2.9	1.1	2.3	2.8	6.9	2.9	4.4	3.7	6.9	
360+00.00	4.6	2.0	2.4	4.7	8.5	3.4	4.4	3.7	9.7	
360+50.00	4.6	1.7	2.4	5.8	10.9	4.6	4.2	3.6	15.8	
361+00.00	7.2	3.3	2.1	11.3	17.1	8.2	3.9	3.3	28.6	
361+50.00	11.3	5.6	2.1	19.6	20.6	10.1	4.4	3.7	28.1	
362+00.00	10.9	5.3	2.7	10.8	16.9	7.7	5.2	4.4	17.2	
362+50.00	7.3	3.0	2.9	7.8	14.7	6.3	5.5	4.7	17.8	
363+00.00	8.6	3.8	3.0	11.4	15.5	6.7	5.6	4.8	19.3	
363+50.00	8.1	3.4	3.1	9.4	15.1	6.1	5.0	4.3	17.8	
364+00.00	8.2	3.2	2.3	9.8	14.4	5.3	4.5	3.8	14.6	
364+50.00	7.3	2.5	2.6	6.0	13.5	4.8	5.0	4.3	10.8	
365+00.00	7.3	2.7	2.8	5.7	10.6	3.1	5.2	4.4	7.3	
365+50.00	4.1	0.6	2.8	2.2	8.7	1.9	5.1	4.3	6.7	
366+00.00	5.3	1.5	2.7	5.0	10.1	3.1	5.4	4.6	8.1	
366+50.00	5.6	1.8	3.1	3.8	9.3	2.8	6.2	5.3	4.9	
367+00.00	4.4	1.2	3.6	1.5	13.3	5.1	23.0	19.6	1.4	
367+50.00	10.0	4.3	21.2	0.0	18.4	8.2	43.1	36.6	0.8	
368+00.00	9.9	4.6	25.3	0.9	4.0	1.9	10.9	9.3	0.4	
368+11.00	9.8	4.6	28.0	0.9	14.7	6.9	43.2	36.7	1.3	
368+50.00	10.6	5.0	31.8	0.9	21.3	10.3	65.5	55.7	1.6	
369+00.00	12.4	6.1	38.9	0.8	22.8	11.1	73.2	62.2	1.6	
369+50.00	12.2	5.9	40.2	0.9	23.4	11.4	80.4	68.3	1.7	
370+00.00	13.1	6.4	46.6	0.9	24.0	12.2	86.2	73.3	1.7	
370+50.00	12.8	6.8	46.5	0.9	22.5	12.4	79.5	67.6	1.7	
371+00.00	11.5	6.6	39.4	0.9	18.9	11.2	63.3	53.8	1.7	
371+50.00	8.9	5.5	29.0	0.9	16.1	10.6	52.1	44.3	1.7	
372+00.00	8.5	6.0	27.3	0.9	12.4	9.6	38.9	33.1	1.8	
372+50.00	4.9	4.4	14.7	1.0	4.5	4.1	13.6	11.6	0.9	
373+00.00	0.0	0.0	0.0	0.0						
	SUBTOTAL				415.0	195.0	760.3	646.3	237.1	

SCHEDULE OF EARTH QUANTITIES - ROLLINS ROAD (FINAL)										
STATION	AREA (SQ FT)				VOLUME (CU YD)					
	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EMBANKMENT	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EARTH EX (15% SHRINKAGE)	EMBANKMENT	
357+41.00	0.0	0.0	0.0	0.0	1.0	0.2	3.2	2.7	0.4	
358+50.00	0.5	0.1	1.6	0.2	1.1	0.6	3.6	3.1	0.4	
359+00.00	0.7	0.6	2.3	0.2	1.7	2.1	4.4	3.7	0.4	
359+50.00	1.1	1.7	2.4	0.2	2.9	4.4	5.7	4.8	0.4	
360+00.00	2.0	3.0	3.8	0.2	3.4	5.6	7.2	6.1	0.4	
360+50.00	1.7	3.1	4.0	0.2	4.6	7.4	10.3	8.8	0.4	
361+00.00	3.3	4.9	7.1	0.2	8.3	11.6	21.9	18.6	0.4	
361+50.00	5.7	7.6	16.5	0.2	10.2	13.8	28.6	24.3	0.4	
362+00.00	5.3	7.3	14.4	0.2	7.7	11.3	18.4	15.6	0.5	
362+50.00	3.0	4.9	5.5	0.3	6.4	9.8	12.4	10.5	0.6	
363+00.00	3.9	5.7	7.9	0.4	6.8	10.1	13.1	11.1	1.0	
363+50.00	3.4	5.2	6.3	0.7	6.1	9.4	10.9	9.3	1.4	
364+00.00	3.2	4.9	5.5	0.8	5.3	8.5	8.7	7.4	1.8	
364+50.00	2.5	4.3	3.9	1.1	4.8	8.1	7.7	6.5	2.1	
365+00.00	2.7	4.4	4.4	1.2	3.1	6.2	5.2	4.4	2.2	
365+50.00	0.6	2.3	1.2	1.2	1.9	5.0	2.9	2.5	2.2	
366+00.00	1.5	3.1	1.9	1.2	3.1	5.9	4.0	3.4	2.3	
366+50.00	1.8	3.3	2.4	1.3	2.8	5.4	3.5	3.0	2.3	
367+00.00	1.2	2.5	1.4	1.2	9.5	11.2	11.4	9.7	5.3	
367+29.00	16.4	18.3	19.9	8.7	0.0	0.0	0.0	0.0	0.0	
367+29.00	16.4	18.3	80.7	8.7	8.1	9.6	32.0	27.2	8.6	
367+50.00	4.4	6.3	1.6	13.4	20.9	22.6	64.3	54.7	49.1	
368+00.00	18.2	18.1	67.8	39.6	7.5	7.4	27.7	23.5	16.7	
368+11.00	18.4	18.3	68.1	42.4	26.7	26.3	97.5	82.9	61.0	
368+50.00	18.5	18.1	66.9	42.0	22.9	24.4	121.9	103.6	81.3	
369+00.00	6.2	8.3	64.7	45.8	1.1	1.4	11.9	10.1	7.2	
369+05.00	5.3	7.3	64.1	31.6	0.0	0.0	0.0	0.0	0.0	
369+05.00	5.3	7.3	0.8	31.6	9.4	12.9	1.3	1.1	62.7	
369+50.00	6.0	8.2	0.8	43.6	11.5	15.6	1.5	1.3	85.1	
370+00.00	6.4	8.7	0.8	48.3	12.2	16.0	1.5	1.3	91.5	
370+50.00	6.8	8.6	0.8	50.5	12.4	15.1	1.5	1.3	88.2	
371+00.00	6.6	7.7	0.8	44.8	11.3	12.6	1.5	1.3	70.7	
371+50.00	5.6	5.9	0.8	31.6	10.7	10.6	1.5	1.3	57.9	
372+00.00	6.0	5.6	0.8	30.9	9.6	8.1	2.3	2.0	43.3	
372+50.00	4.4	3.2	1.7	15.9	4.1	3.0	1.6	1.4	14.7	
373+00.00	0.0	0.0	0.0	0.0						
	SUBTOTAL				259.1	322.2	551.1	468.4	762.9	

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USER NAME = jgellman	DESIGNED -	REVISED -
PLOT SCALE = 2.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 4/8/2013	CHECKED -	REVISED -
	DATE = 4/8/2013	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.

F.A.D. RTE. 181	SECTION 12-F3000-01-BT	COUNTY LAKE	TOTAL SHEETS 118	SHEET NO. 13
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCHEDULE OF EARTH QUANTITIES - MILLENNIUM TRAIL (NORTH ALIGNMENT)									
STATION	AREA (SQ FT)				VOLUME (CU YD)				
	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EMBANKMENT	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EARTH EX (15% SHRINKAGE)	EMBANKMENT
105+50.00	0.0	0.0	0.0	0.0					
105+69.00	7.5	5.0	0.0	3.9	2.6	1.8	0.0	0.0	1.4
106+00.00	6.2	4.1	1.3	1.2	7.9	5.2	0.7	0.6	2.9
106+50.00	7.8	5.2	4.8	0.6	13.0	8.6	5.6	4.8	1.7
107+00.00	9.4	6.4	9.7	0.6	15.9	10.7	13.4	11.4	1.1
107+50.00	10.9	7.2	12.7	1.0	18.8	12.6	20.7	17.6	1.5
108+00.00	10.8	7.2	13.2	1.0	20.1	13.3	24.0	20.4	1.9
108+50.00	10.5	7.0	11.4	1.5	19.7	13.1	22.8	19.4	2.3
109+00.00	11.2	7.5	11.8	1.3	20.1	13.4	21.5	18.3	2.6
109+30.00	14.6	9.6	14.5	4.8	14.3	9.5	14.6	12.4	3.4
109+50.00	14.8	9.7	15.3	5.0	10.9	7.1	11.0	9.4	3.6
109+78.35	15.0	9.7	18.8	1.6	15.6	10.2	17.9	15.2	3.5
110+00.00	18.3	11.5	27.0	0.4	13.4	8.5	18.4	15.6	0.8
110+50.00	26.3	13.1	49.9	0.1	41.3	22.8	71.2	60.5	0.5
110+90.22	27.7	13.4	43.6	0.1	40.2	19.7	69.6	59.2	0.1
111+00.00	22.4	10.9	45.4	0.0	9.1	4.4	16.1	13.7	0.0
111+50.00	27.1	14.0	36.5	0.0	45.8	23.1	75.8	64.4	0.0
112+00.00	27.2	14.1	26.0	0.7	50.3	26.0	57.9	49.2	0.6
112+19.04	34.4	12.5	32.7	0.8	21.7	9.4	20.7	17.6	0.5
112+36.92	35.6	15.6	81.5	0.1	23.2	9.3	37.8	32.1	0.3
112+50.13	34.2	16.7	113.7	0.1	17.1	7.9	47.8	40.6	0.0
112+80.43	39.3	22.1	231.6	0.6	41.2	21.8	193.8	164.7	0.4
113+00.00	44.6	25.7	370.1	0.5	30.4	17.3	218.1	185.4	0.4
113+24.42	50.4	29.2	507.5	0.6	43.0	24.8	396.9	337.4	0.5
113+50.00	51.7	30.3	601.0	0.4	48.4	28.2	525.1	446.3	0.5
114+00.00	53.0	31.2	707.6	0.5	96.9	56.9	1211.7	1029.9	0.8
114+50.00	60.3	36.1	874.1	0.6	104.9	62.3	1464.5	1244.8	1.0
115+00.00	70.9	43.2	1254.5	0.4	121.5	73.4	1970.9	1675.3	0.9
115+50.00	60.0	35.8	1237.3	0.6	121.2	73.1	2307.2	1961.1	0.9

SCHEDULE OF EARTH QUANTITIES - MILLENNIUM TRAIL (NORTH ALIGNMENT) - CONTINUED									
STATION	AREA (SQ FT)				VOLUME (CU YD)				
	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EMBANKMENT	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EARTH EX (15% SHRINKAGE)	EMBANKMENT
115+50.00	60.0	35.8	1237.3	0.6					
115+54.50	60.6	36.3	1294.6	0.5	10.1	6.0	211.0	179.4	0.1
115+64.50	49.3	26.8	936.5	0.1	20.4	11.7	413.2	351.2	0.1
UNDERPASS									
116+89.50	47.9	25.9	863.3	0.1					
117+00.00	59.7	35.7	1269.7	0.5	20.9	12.0	414.8	352.6	0.1
117+50.00	74.8	45.8	1519.3	0.3	124.5	75.5	2582.4	2195.0	0.7
118+00.00	72.3	44.1	1393.9	0.4	136.2	83.2	2697.4	2292.8	0.6
118+50.00	66.8	40.4	1156.6	0.4	128.8	78.2	2361.6	2007.4	0.7
119+00.00	61.2	36.7	920.5	0.5	118.5	71.4	1923.2	1634.7	0.8
119+50.00	57.7	33.4	721.8	0.3	110.1	64.9	1520.6	1292.5	0.7
120+00.00	46.1	30.9	529.8	0.4	96.1	59.5	1158.9	985.1	0.6
120+50.00	32.6	20.5	191.5	0.3	72.9	47.6	667.9	567.7	0.6
121+00.00	18.8	12.1	36.0	1.3	47.6	30.2	210.6	179.0	1.5
121+17.30	20.9	9.9	7.4	8.8	12.7	7.0	13.9	11.8	3.2
SUBTOTAL					1,927.3	1,141.6	23,031.2	19,576.5	43.8

SCHEDULE OF EARTH QUANTITIES - MILLENNIUM TRAIL (SOUTH ALIGNMENT)									
STATION	AREA (SQ FT)				VOLUME (CU YD)				
	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EMBANKMENT	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EARTH EX (15% SHRINKAGE)	EMBANKMENT
109+16.00	6.5	4.3	1.1	3.3					
109+50.00	7.0	4.6	6.2	0.2	8.5	5.6	4.6	3.9	2.2
110+00.00	7.0	4.7	10.3	0.1	13.0	8.6	15.3	13.0	0.3
110+07.00	20.5	9.7	9.2	4.1	3.6	1.9	2.5	2.1	0.5
110+50.00	26.6	13.9	37.1	0.1	37.5	18.8	36.9	31.4	3.3
110+82.67	27.8	14.7	39.8	0.1	32.9	17.3	46.5	39.5	0.1
111+00.00	23.0	14.3	31.7	2.0	16.3	9.3	22.9	19.5	0.7
111+22.66	32.2	13.7	26.8	10.1	23.2	11.7	24.5	20.8	5.1
111+50.00	33.2	17.7	17.7	18.6	33.1	15.9	22.5	19.1	14.5
112+00.00	22.6	11.1	19.7	1.9	51.7	26.7	34.6	29.4	19.0
SUBTOTAL					219.8	115.8	210.3	178.8	45.7

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	DATE = 4/8/2013	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

SCHEDULE OF QUANTITIES ROLLINS ROAD UNDERPASS			
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.U. RTE. 181	SECTION 12-F3000-01-BT	COUNTY LAKE	TOTAL SHEETS 118	SHEET NO. 14
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

SCHEDULE OF EARTH QUANTITIES - MILLENNIUM TRAIL (EXISTING ALIGNMENT)									
STATION	AREA (SQ FT)				VOLUME (CU YD)				
	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EMBANKMENT	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	EARTH EX (15% SHRINKAGE)	EMBANKMENT
311+00.00	9.1	6.0	3.4	1.3					
					27.6	18.0	22.7	19.3	11.6
311+50.00	20.7	13.4	21.1	11.2					
					54.9	36.0	20.3	17.3	39.5
312+00.00	38.6	25.5	0.8	31.5					
					82.5	54.0	43.0	36.6	51.1

CONDENSED SCHEDULE OF EARTH QUANTITIES						
LOCATION	VOLUME (CU YD)					
	21101505	20200100	X5020200			
	TOPSOIL CUT	TOPSOIL FILL	EARTH EX	STRUCTURE EX (SPECIAL)	EARTH EX (15% SHRINKAGE)	EMBANKMENT
ROLLINS ROAD - PRE-STAGE	415.0	195.0	760.3		646.3	237.1
ROLLINS ROAD - FINAL	259.1	322.2	551.1		468.4	762.9
NORTH ALIGNMENT	1,927.3	1,141.6	23,031.2		19,576.5	43.8
SOUTH ALIGNMENT	219.8	115.8	210.3		178.8	45.7
EXISTING PATH	82.5	54.0	43.0		36.6	51.1
UNDERPASS				8,826.0	7,502.1	
PROJECT SUBTOTALS	2,903.7	1,828.6	24,595.9	8,826.0	28,408.6	1,140.6
BERM		1,075.1				27,268.0
PROJECT TOTALS	2,903.7	2,903.7	24,595.9	8,826.0	28,408.6	28,408.6

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PLT DATE = 4/8/2013	CHECKED -	REVISED -
	DATE = 4/8/2013	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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**SCHEDULE OF QUANTITIES
ROLLINS ROAD UNDERPASS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	15
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

CONTRACT NO. 63807

EXISTING BIKE PATH

EXIST. CURVE EX_PATH-1 PI STA. = 30+880.99 Δ = 18° 17' 50" (RT) D = 17° 37' 46" R = 325.00' T = 52.34' L = 103.79' E = 4.19' P.C. STA. = 30+828.65 P.T. STA. = 30+932.44	EXIST. CURVE EX_PATH-2 PI STA. = 31+021.66 Δ = 16° 54' 56" (RT) D = 9° 32' 57" R = 600.00' T = 89.22' L = 177.14' E = 6.60' P.C. STA. = 30+932.44 P.T. STA. = 31+109.58	EXIST. CURVE EX_PATH-3 PI STA. = 31+171.93 Δ = 2° 51' 27" (LT) D = 2° 17' 31" R = 2,500.00' T = 62.35' L = 124.68' E = 0.78' P.C. STA. = 31+109.58 P.T. STA. = 31+234.25	EXIST. CURVE EX_PATH-4 PI STA. = 31+337.38 Δ = 48° 17' 54" (RT) D = 24° 54' 40" R = 230.00' T = 103.12' L = 193.88' E = 22.06' P.C. STA. = 31+234.25 P.T. STA. = 31+428.14	EXIST. CURVE EX_PATH-5 PI STA. = 31+548.69 Δ = 41° 17' 13" (RT) D = 17° 54' 18" R = 320.00' T = 120.56' L = 230.59' E = 21.96' P.C. STA. = 31+428.14 P.T. STA. = 31+658.73
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ROLLINS ROAD

EXIST. CURVE EX_ROLLINS-1 PI STA. = 35+752.70 Δ = 36° 22' 59" (LT) D = 4° 00' 24" R = 1,430.00' T = 469.93' L = 908.05' E = 75.23' P.C. STA. = 35+282.77 P.T. STA. = 36+190.83	EXIST. CURVE EX_ROLLINS-2 PI STA. = 37+476.86 Δ = 2° 13' 46" (RT) D = 0° 11' 28" R = 30,000.00' T = 583.72' L = 1,167.29' E = 5.68' P.C. STA. = 36+893.14 P.T. STA. = 38+060.43
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PROPOSED BIKE PATH - NORTH

PROP. CURVE RBP_01UN-6 PI STA. = 108+80.99 Δ = 18° 17' 50" (RT) D = 17° 37' 46" R = 325.00' T = 52.34' L = 103.79' E = 4.19' P.C. STA. = 108+28.65 P.T. STA. = 109+32.44	PROP. CURVE RBP_01UN-7 PI STA. = 109+55.40 Δ = 4° 23' 02" (RT) D = 9° 32' 57" R = 600.00' T = 22.97' L = 45.91' E = 0.44' P.C. STA. = 109+32.44 P.T. STA. = 109+78.35	PROP. CURVE RBP_01UN-8 PI STA. = 112+51.69 Δ = 68° 41' 38" (LT) D = 14° 19' 26" R = 400.00' T = 273.34' L = 479.57' E = 84.47' P.C. STA. = 109+78.35 P.T. STA. = 114+57.92
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PROP. CURVE RBP_01UN-9 PI STA. = 115+11.19 Δ = 28° 28' 02" (LT) D = 27° 17' 01" R = 210.00' T = 53.27' L = 104.34' E = 6.65' P.C. STA. = 114+57.92 P.T. STA. = 115+62.26	PROP. CURVE RBP_01UN-10 PI STA. = 117+98.70 Δ = 69° 19' 00" (LT) D = 38° 11' 50" R = 150.00' T = 103.70' L = 181.47' E = 32.36' P.C. STA. = 116+95.00 P.T. STA. = 118+76.47	PROP. CURVE RBP_01UN-11 PI STA. = 119+57.17 Δ = 56° 33' 43" (RT) D = 38° 11' 50" R = 150.00' T = 80.70' L = 148.08' E = 20.33' P.C. STA. = 118+76.47 P.T. STA. = 120+24.55	PROP. CURVE RBP_01UN-12 PI STA. = 122+12.59 Δ = 89° 03' 11" (LT) D = 114° 35' 30" R = 50.00' T = 49.18' L = 77.71' E = 20.13' P.C. STA. = 121+63.41 P.T. STA. = 122+41.12
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PROPOSED BIKE PATH - SOUTH

PROP. CURVE RBP_01US-13 PI STA. = 108+31.94 Δ = 41° 17' 13" (LT) D = 17° 54' 18" R = 320.00' T = 120.56' L = 230.59' E = 21.96' P.C. STA. = 107+11.38 P.T. STA. = 109+41.97	PROP. CURVE RBP_01US-14 PI STA. = 110+14.60 Δ = 35° 02' 59" (LT) D = 24° 54' 40" R = 230.00' T = 72.63' L = 140.70' E = 11.19' P.C. STA. = 109+41.97 P.T. STA. = 110+82.67	PROP. CURVE RBP_01US-15 PI STA. = 112+34.65 Δ = 113° 18' 34" (RT) D = 57° 17' 45" R = 100.00' T = 151.97' L = 197.76' E = 81.92' P.C. STA. = 110+82.67 P.T. STA. = 112+80.43
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PROJECT COORDINATES - ROLLINS ROAD

Description	Station	North	East
POT	334+70	2082800.78	1068427.68
PC	352+83	2081961.71	1070034.57
PT	361+91	2081816.17	1070915.51
PC	368+93	2081923.74	1071609.54
PT	380+60	2082080.05	1072766.24

PROJECT COORDINATES - EXISTING PATH

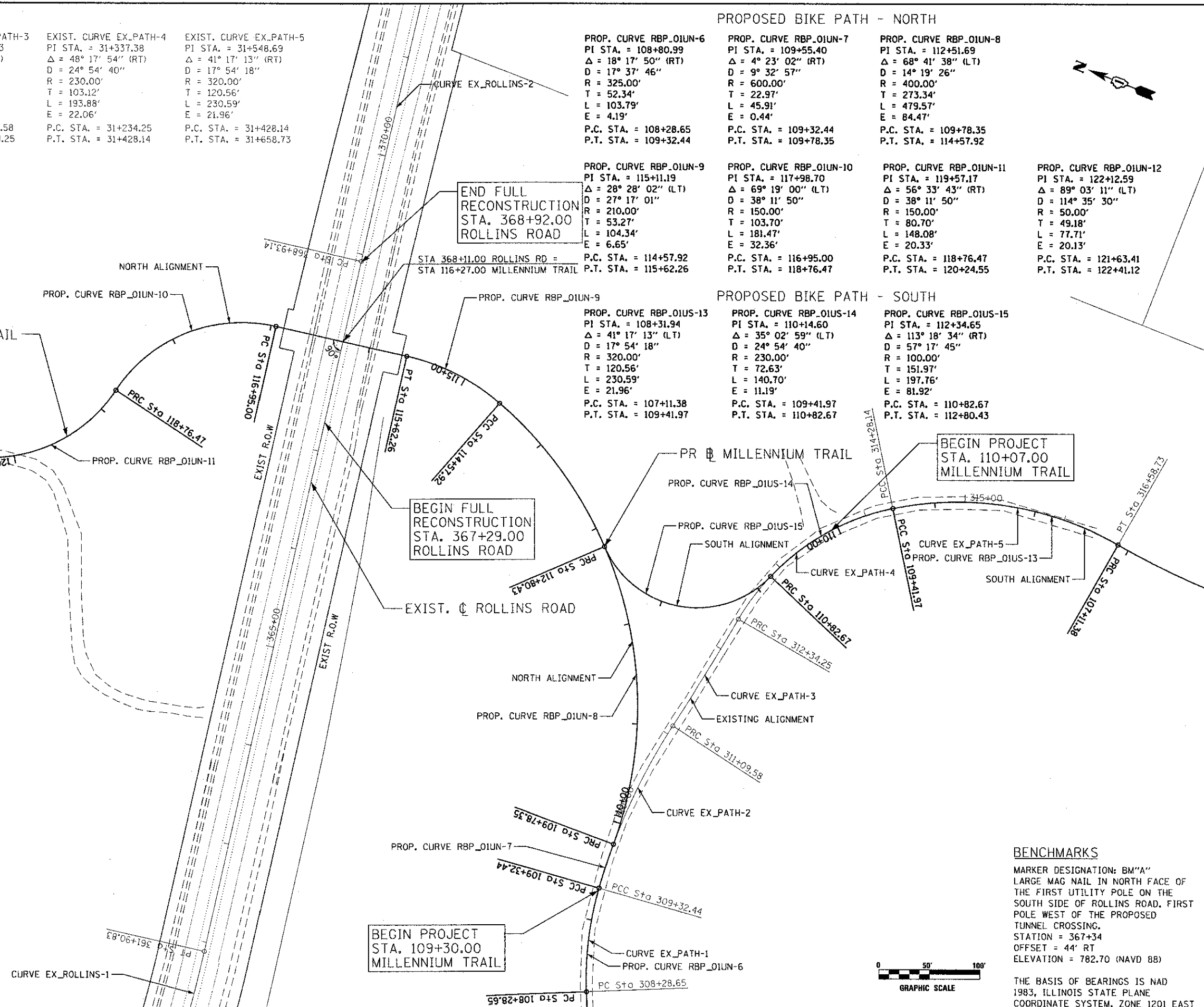
Description	Station	North	East
POT	308+00	2081438.64	1070991.35
PC	308+29	2081450.22	1071017.55
PCC	309+32	2081476.42	1071117.52
PRC	311+10	2081467.42	1071293.79
PRC	312+34	2081445.88	1071416.58
PCC	314+28	2081344.29	1071575.00
PT	316+59	2081124.04	1071623.98

PROJECT COORDINATES - PROPOSED PATH (NORTH ALIGNMENT)

Description	Station	North	East
PC	108+29	2081450.22	1071017.55
PCC	109+32	2081476.42	1071117.52
PRC	109+78	2081479.09	1071163.34
PCC	114+58	2081744.38	1071528.52
PT	115+62	2081847.18	1071538.28
PC	116+95	2081978.36	1071517.95
PRC	118+76	2082102.17	1071400.58
PT	120+25	2082193.83	1071291.94
PC	121+63	2082322.97	1071240.90
PRC	122+41	2082351.39	1071176.79

PROJECT COORDINATES - PROPOSED PATH (SOUTH ALIGNMENT)

Description	Station	North	East
PRC	107+11	2081124.04	1071623.98
PCC	109+42	2081344.29	1071575.00
PRC	110+83	2081432.02	1071467.80
PRC	112+80	2081595.69	1071434.28



BENCHMARKS
 MARKER DESIGNATION: BM "A"
 LARGE MAG NAIL IN NORTH FACE OF THE FIRST UTILITY POLE ON THE SOUTH SIDE OF ROLLINS ROAD. FIRST POLE WEST OF THE PROPOSED TUNNEL CROSSING.
 STATION = 367+34
 OFFSET = 44' RT
 ELEVATION = 782.70 (NAVD 88)
 THE BASIS OF BEARINGS IS NAD 1983, ILLINOIS STATE PLANE COORDINATE SYSTEM, ZONE 1201 EAST



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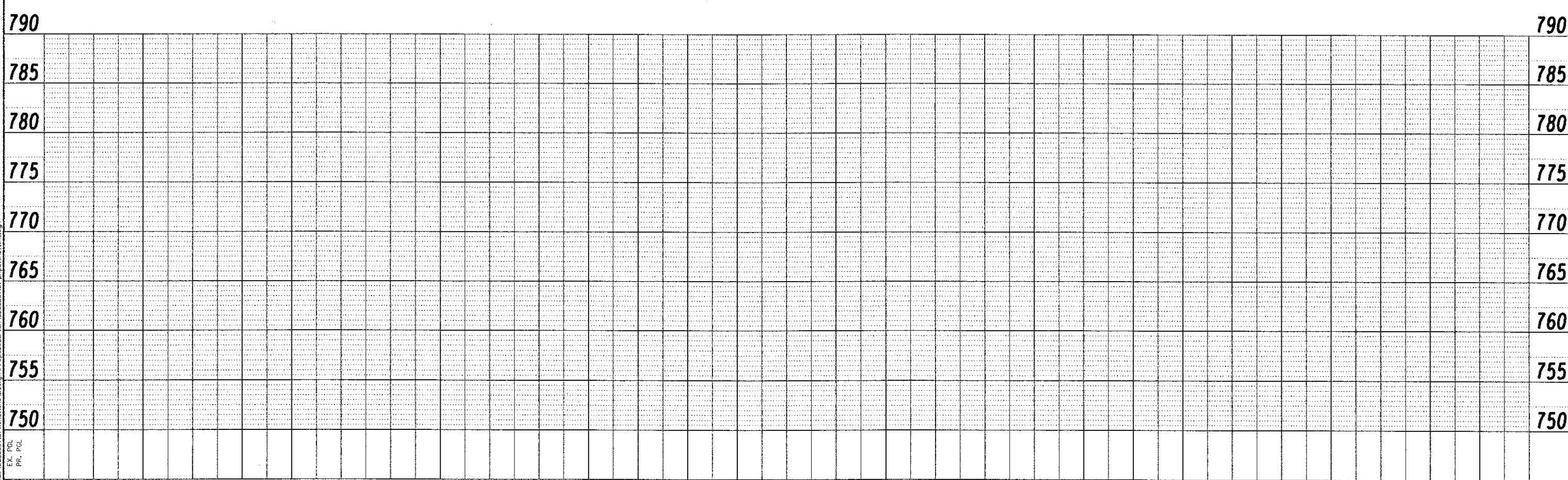
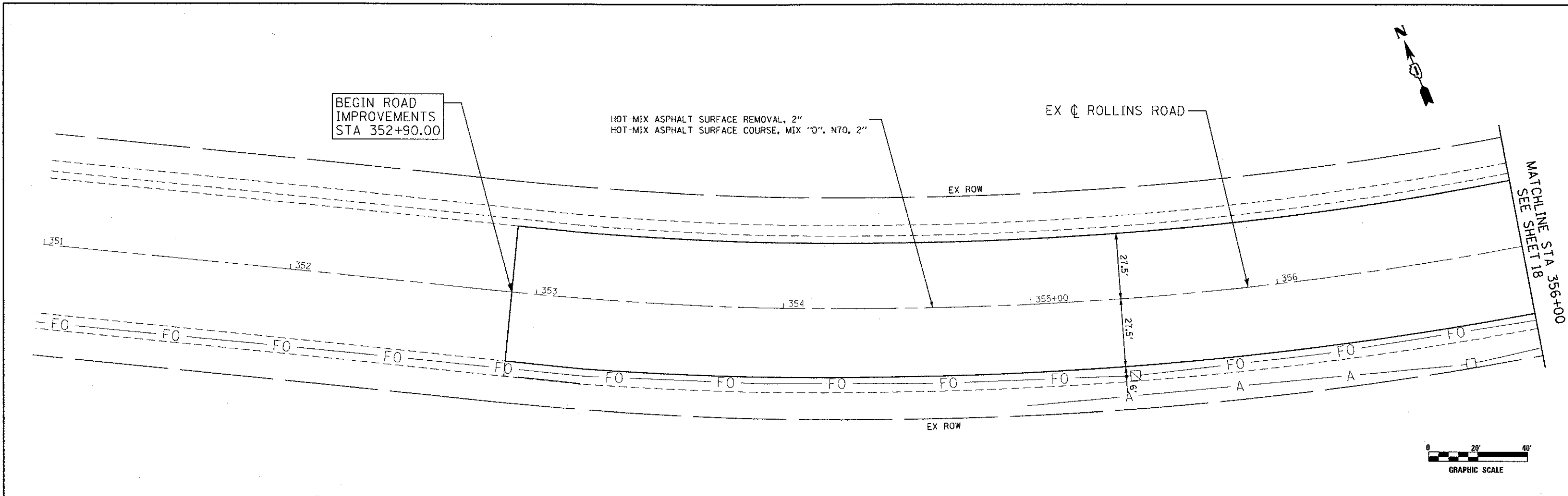
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	DATE -	REvised -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**ALIGNMENTS, TIES, AND BENCHMARKS
 ROLLINS ROAD UNDERPASS**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	16
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



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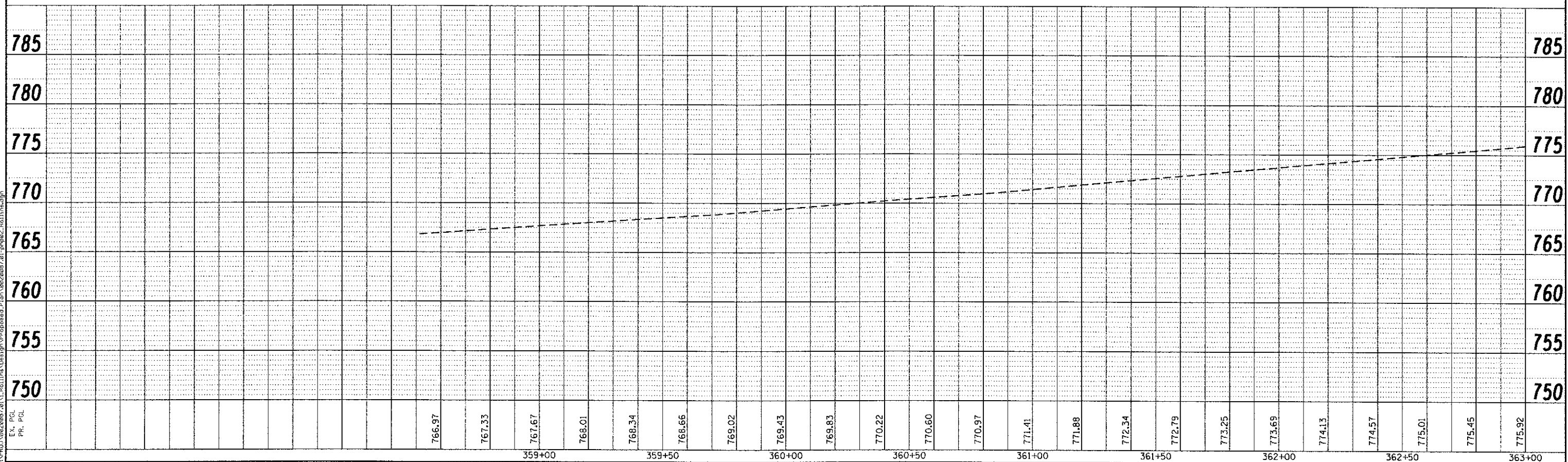
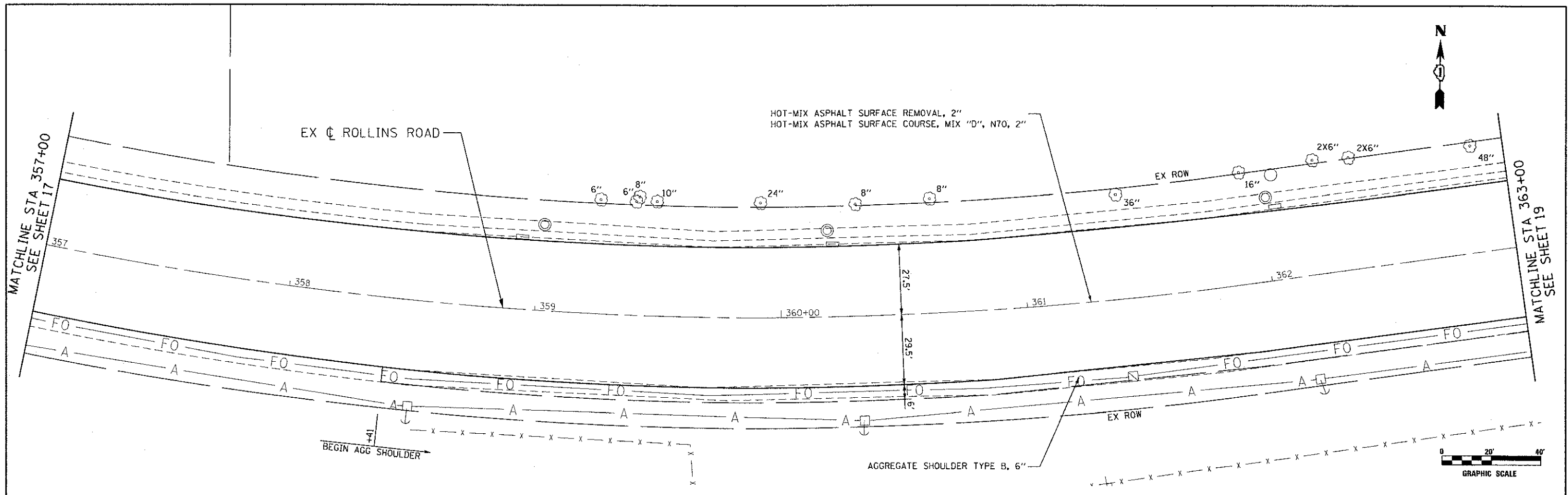
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**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**PLAN AND PROFILE - ROLLINS ROAD
 ROLLINS ROAD UNDERPASS**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	17
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	



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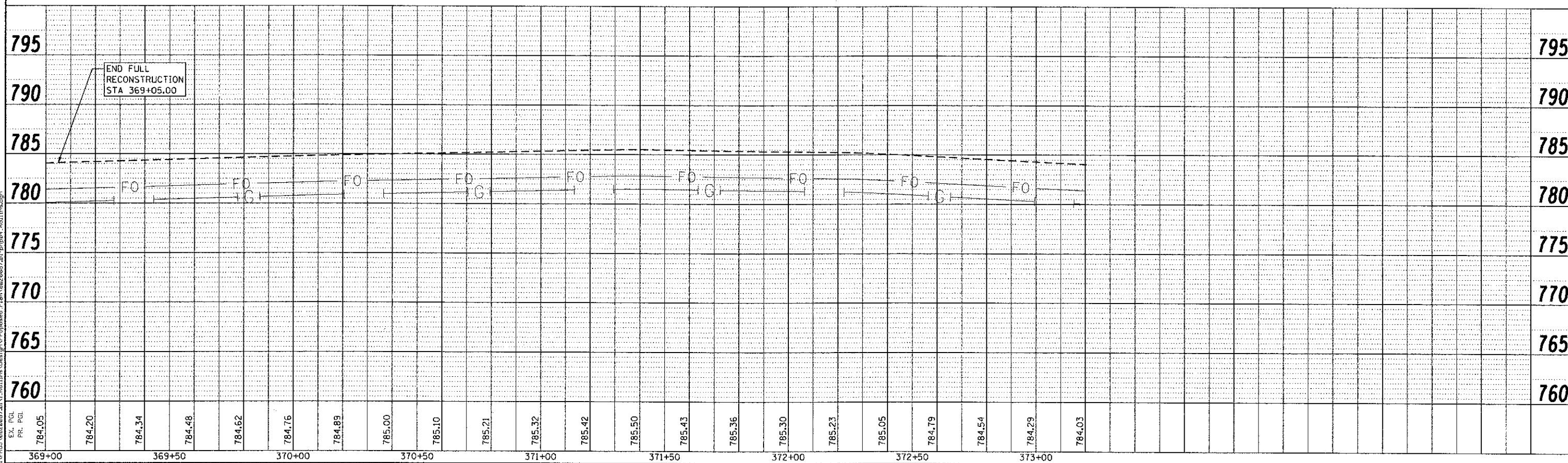
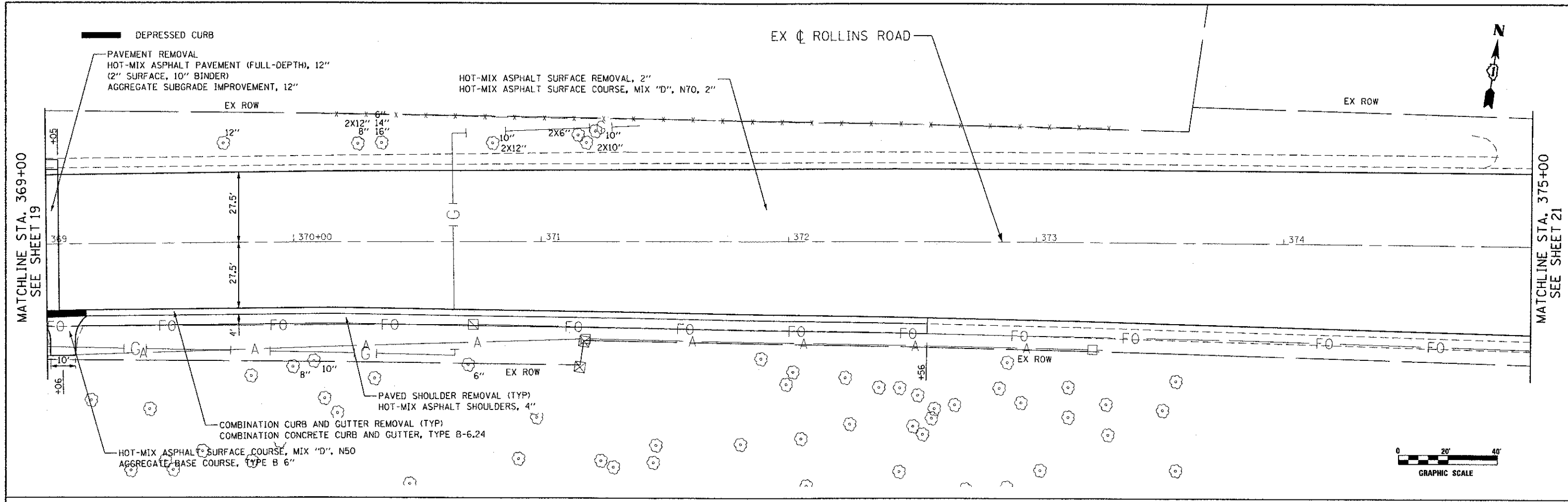
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**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

SCALE:		SHEET NO.	OF SHEETS	STA.	TO STA.

**PLAN AND PROFILE - ROLLINS ROAD
 ROLLINS ROAD UNDERPASS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	18
FED. ROAD DIST. NO. - ILLINOIS			CONTRACT NO. 63807	
FED. AID PROJECT				



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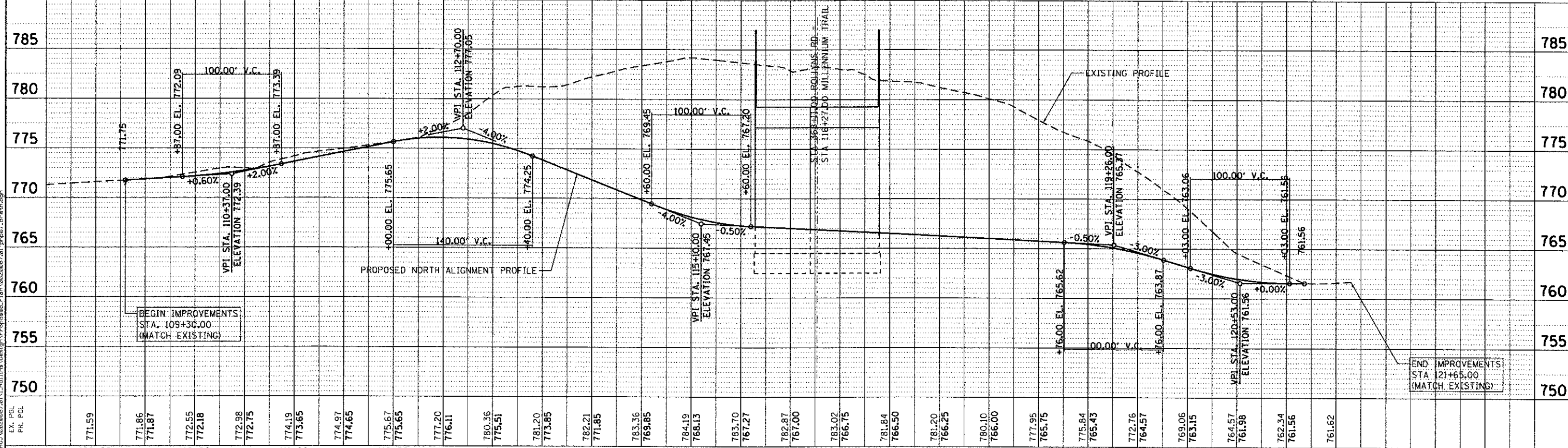
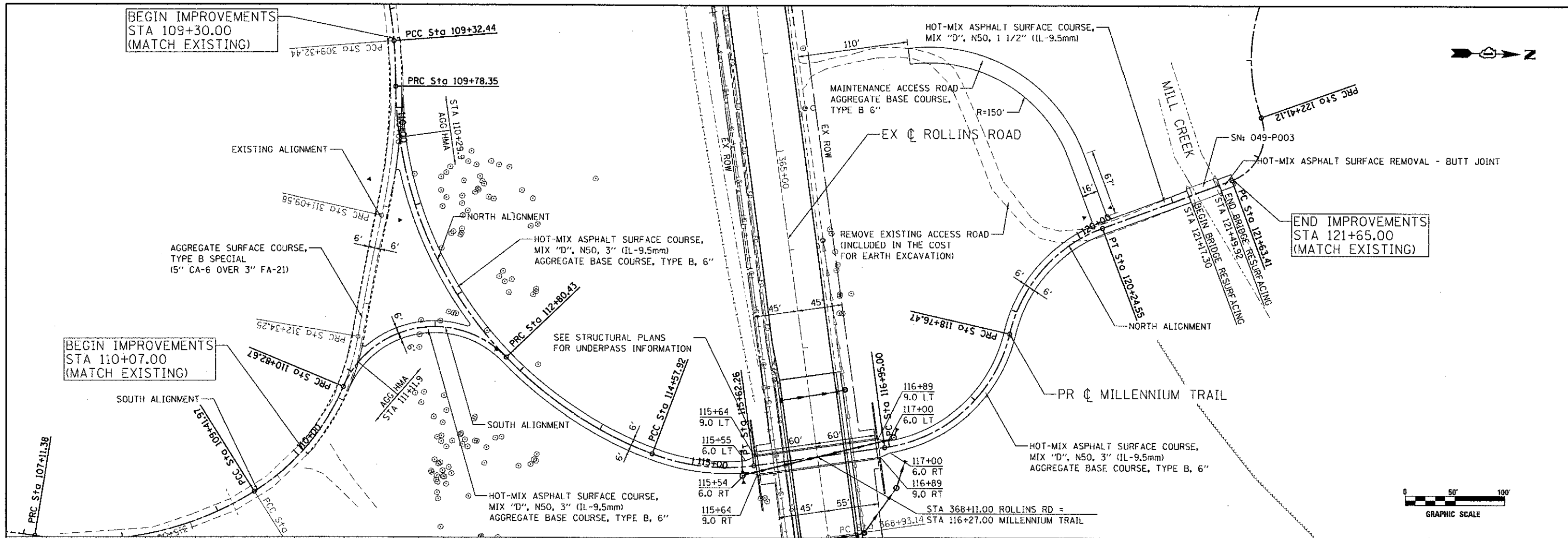
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**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

PLAN AND PROFILE - ROLLINS ROAD			
ROLLINS ROAD UNDERPASS			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	20
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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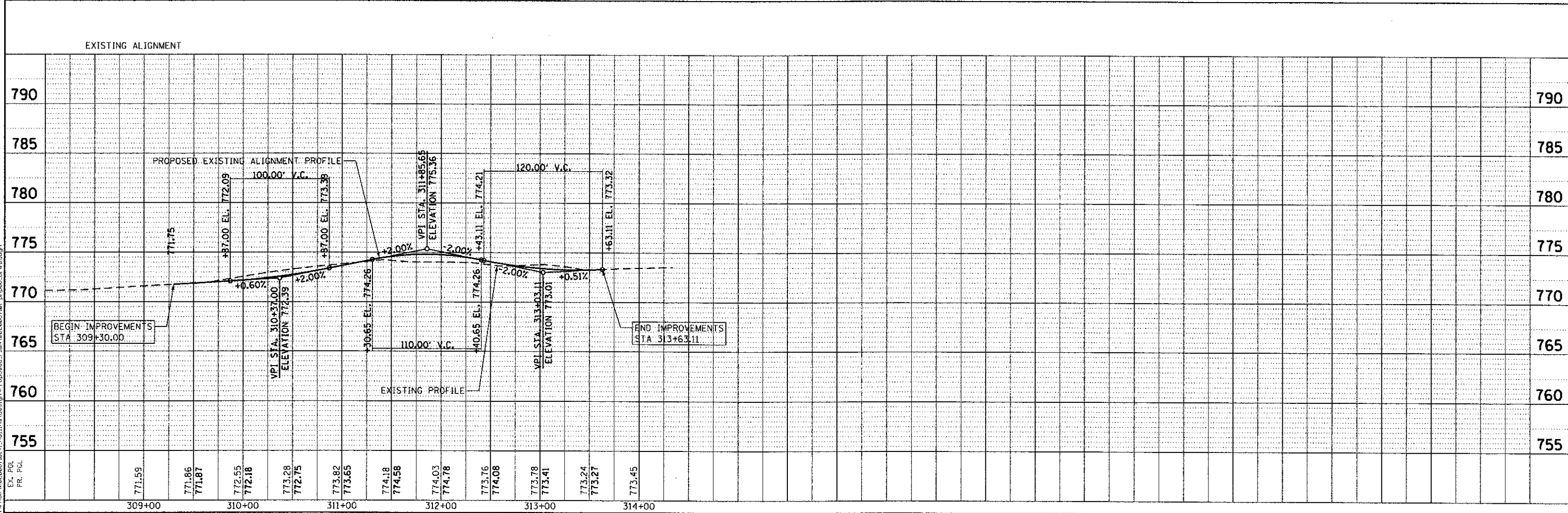
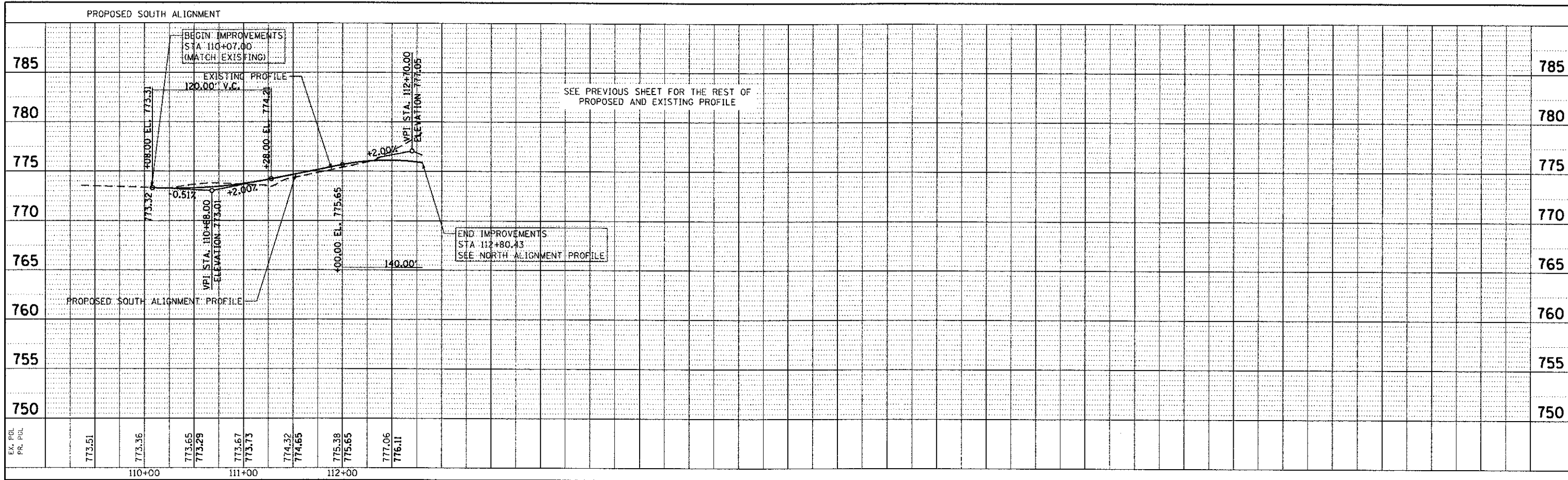
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**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

PLAN AND PROFILE - MILLENNIUM TRAIL ROLLINS ROAD UNDERPASS	
SCALE: 1" = 100.0000'	SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE. 181	SECTION 12-F3000-01-BT	COUNTY LAKE	TOTAL SHEETS 118	SHEET NO. 23
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**PROFILE - MILLENNIUM TRAIL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	24
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CONSTRUCTION SEQUENCE

PRE-STAGE

CONSTRUCTION:

INSTALL PERIMETER EROSION BARRIER AND EROSION CONTROL MEASURES TO PROTECT EXISTING DRAINAGE SYSTEM. REMOVE PAVED SHOULDER AND CURB AND GUTTER. CONSTRUCT TEMPORARY PAVEMENT ALONG EASTBOUND ROLLINS ROAD.

TRAFFIC CONTROL:

CLOSE EASTBOUND OUTSIDE TRAFFIC LANE UTILIZING STATE STANDARD 701606.

STAGE 1

CONSTRUCTION:

CONSTRUCT WESTBOUND ROLLINS ROAD UNDERPASS, BINDER COURSE AND CURB AND GUTTER. CONSTRUCT MILLENNIUM TRAIL NORTH OF ROLLINS ROAD. INSTALL DITCH CHECKS AND PLACE TEMPORARY SEED.

TRAFFIC CONTROL:

CLOSE WESTBOUND TRAFFIC LANES AND SHIFT TRAFFIC ONTO EASTBOUND LANES PROVIDING TWO-WAY TRAFFIC.

STAGE 2

CONSTRUCTION:

CONSTRUCT EASTBOUND ROLLINS ROAD UNDERPASS, BINDER COURSE AND CURB AND GUTTER. CONSTRUCT MILLENNIUM TRAIL SOUTH OF ROLLINS ROAD. INSTALL DITCH CHECKS AND PLACE TEMPORARY SEED.

TRAFFIC CONTROL:

CLOSE EASTBOUND TRAFFIC LANES AND SHIFT TRAFFIC ONTO WESTBOUND LANES PROVIDING TWO-WAY TRAFFIC.

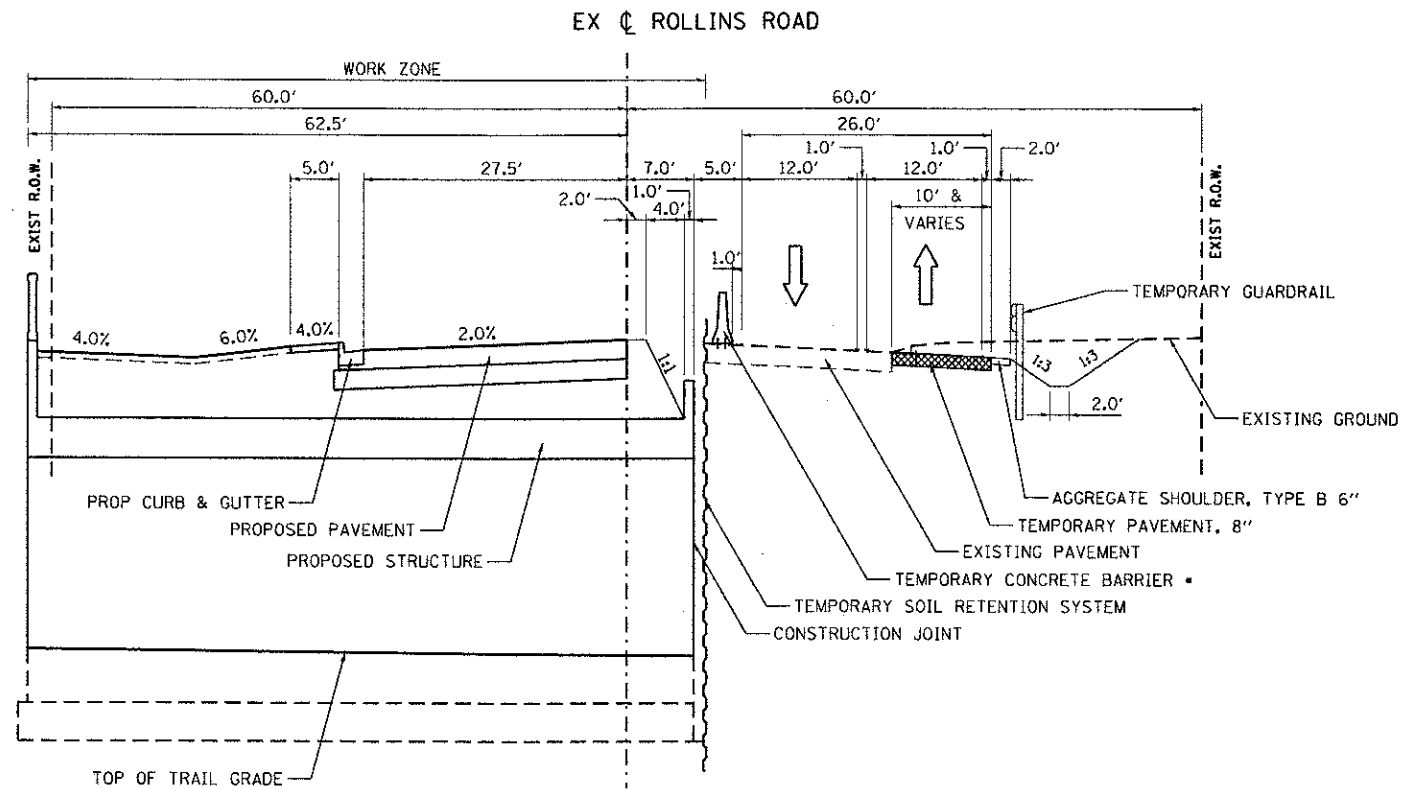
STAGE 3

CONSTRUCTION:

CONSTRUCT SURFACE COURSE AND FINAL PAVEMENT MARKINGS. INSTALL PERMANENT SEEDINGS IN ALL DISTURBED AREAS.

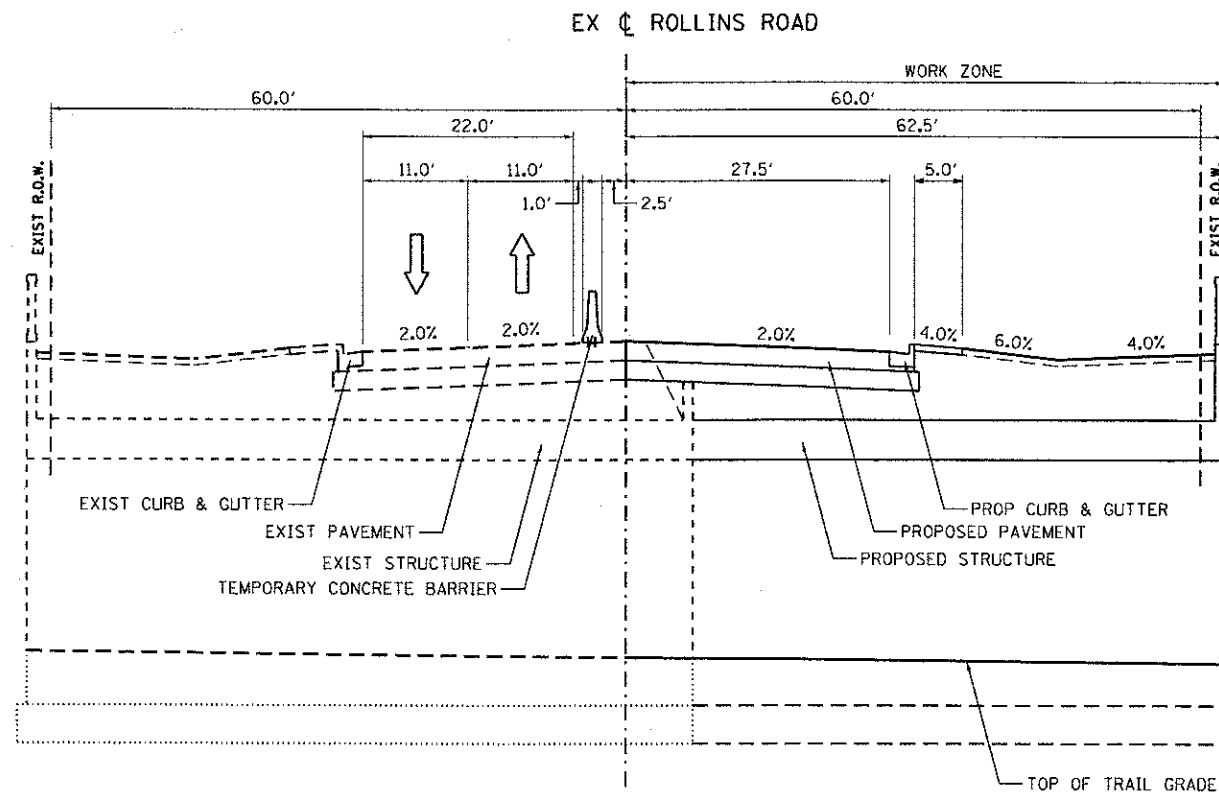
TRAFFIC CONTROL:

UTILIZE STATE STANDARD 701606.



STAGE 1 TYPICAL
STA. 368+01 TO STA. 368+21

• TEMPORARY TRAFFIC BARRIER SHALL BE PINNED FOR STAGE I & STAGE II CONSTRUCTION FROM STA 367+29 TO STA 369+05



STAGE 2 TYPICAL
STA. 368+01 TO STA. 368+21

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**STAGES OF CONSTRUCTION - TYPICAL SECTIONS
ROLLINS ROAD UNDERPASS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	25
CONTRACT NO. 63807			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	

SCALE: SHEET NO. OF SHEETS STA. TO STA.

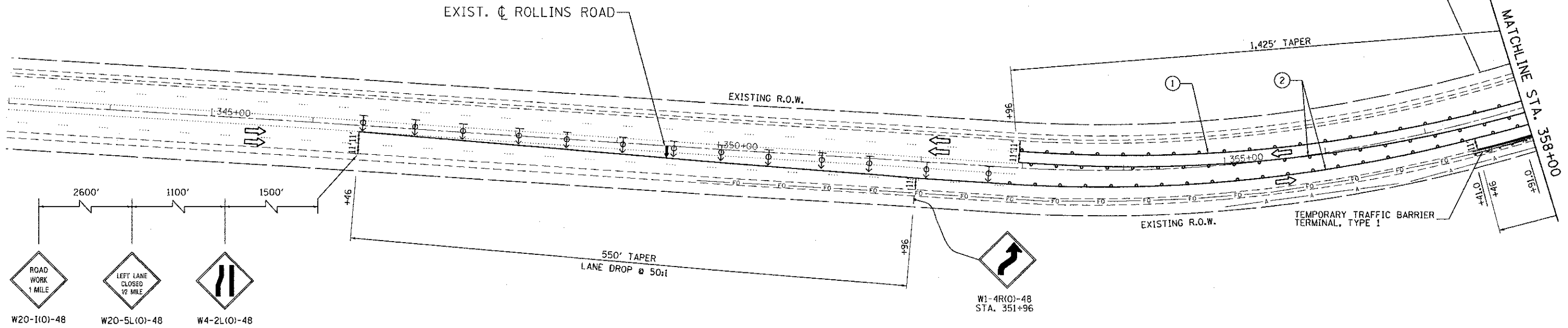
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PLOT DATE = 4/8/2013	CHECKED -	REVISIONS -
	DATE -	REVISIONS -

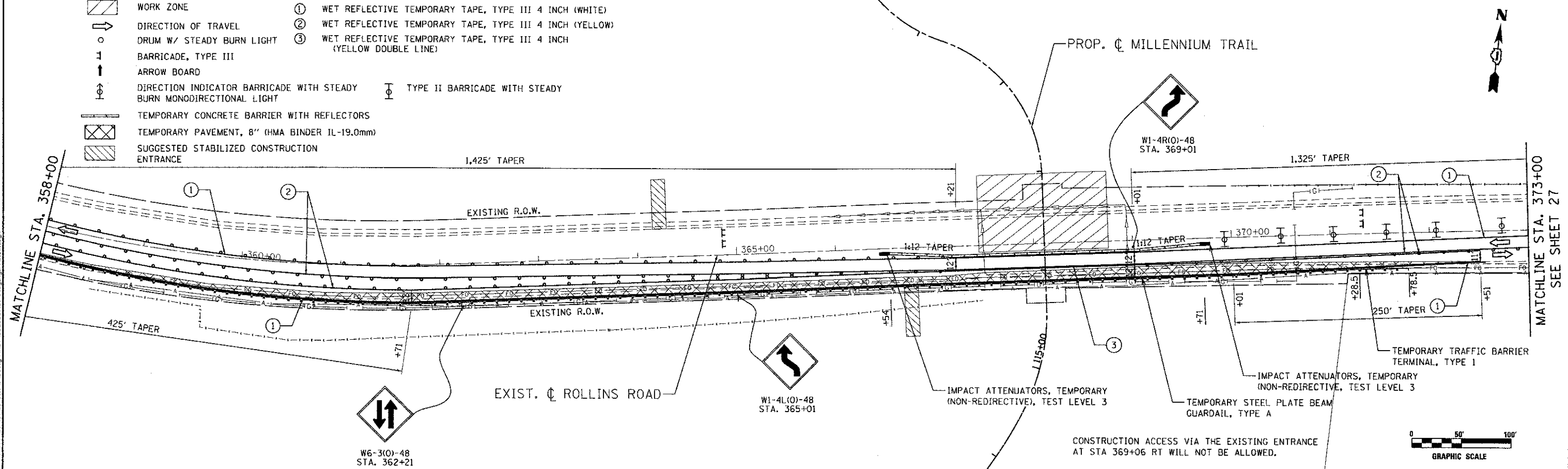
NOTES:

1. SPACING OF ALL DRUMS AND BARRICADES ALONG ROLLINS ROAD SHALL BE AT 50' CENTER TO CENTER.
2. FLEXIBLE DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH IDOT STANDARD 701431.



LEGEND

- WORK ZONE
- DIRECTION OF TRAVEL
- DRUM W/ STEADY BURN LIGHT
- BARRICADE, TYPE III
- ARROW BOARD
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER WITH REFLECTORS
- TEMPORARY PAVEMENT, 8" (HMA BINDER IL-19.0mm)
- SUGGESTED STABILIZED CONSTRUCTION ENTRANCE
- 1 WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (WHITE)
- 2 WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW)
- 3 WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW DOUBLE LINE)
- TYPE II BARRICADE WITH STEADY BURN



CONSTRUCTION ACCESS VIA THE EXISTING ENTRANCE AT STA 369+06 RT WILL NOT BE ALLOWED.



Ciorba Group, Inc.
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USER NAME = jk.jellman	DESIGNED -	REVISED -
PLOT SCALE = 1/8" = 100.0000' / 1" = 100'	DRAWN -	REVISED -
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	DATE -	REVISED -

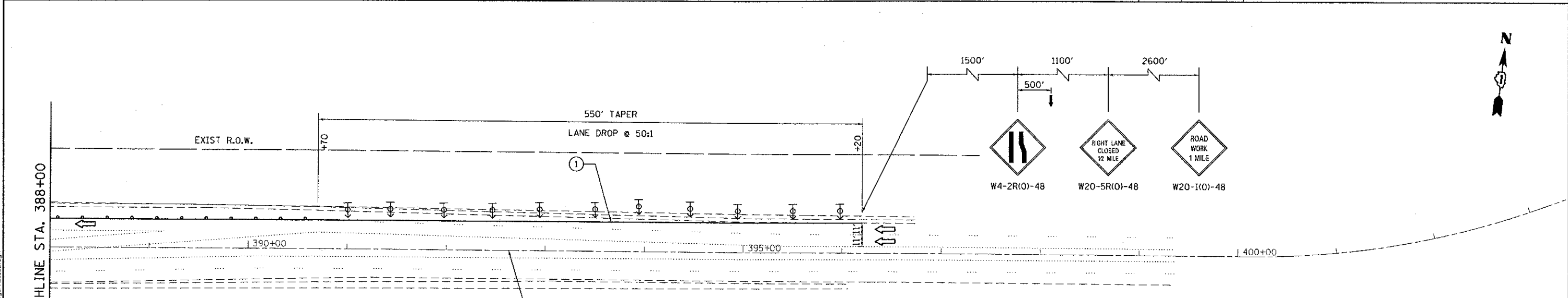
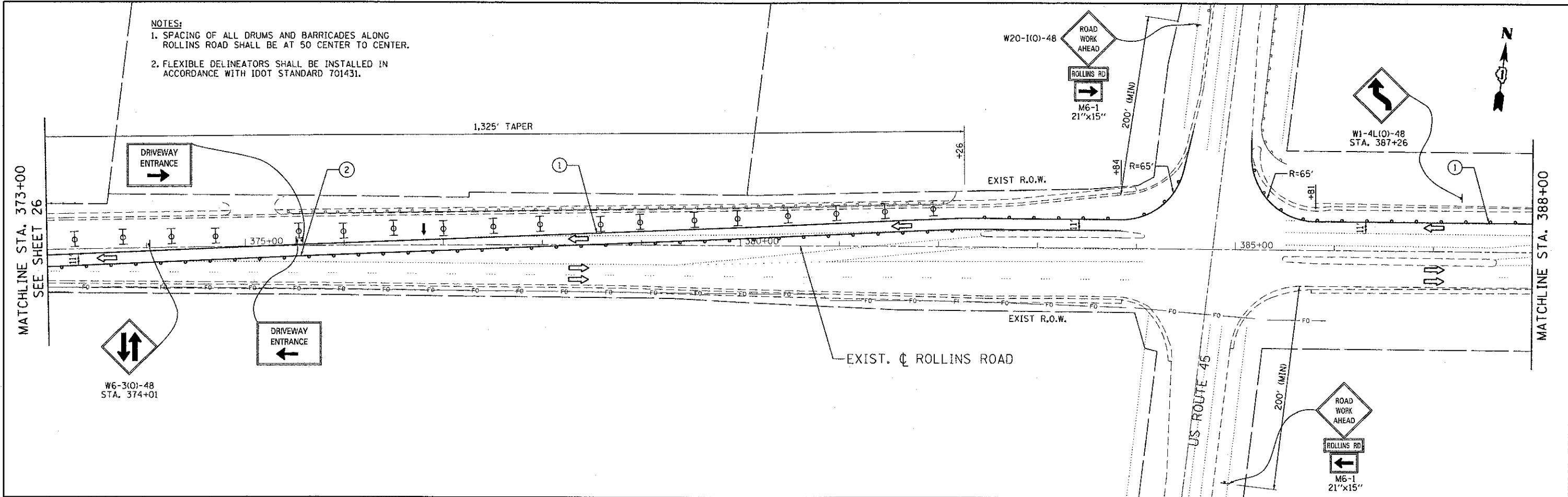
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**STAGES OF CONSTRUCTION - STAGE 1
 ROLLINS ROAD UNDERPASS**

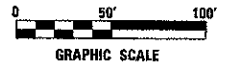
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.
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F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	26
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	

NOTES:
 1. SPACING OF ALL DRUMS AND BARRICADES ALONG ROLLINS ROAD SHALL BE AT 50 CENTER TO CENTER.
 2. FLEXIBLE DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH IDOT STANDARD 701431.



- LEGEND**
- WORK ZONE
 - DIRECTION OF TRAVEL
 - DRUM W/ STEADY BURN LIGHT
 - BARRICADE, TYPE III
 - ARROW BOARD
 - DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
 - TEMPORARY CONCRETE BARRIER WITH REFLECTORS
 - TEMPORARY PAVEMENT, 8" (HMA BINDER IL-19.0mm)
 - SUGGESTED STABILIZED CONSTRUCTION ENTRANCE
 - ① WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (WHITE)
 - ② WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW)
 - ③ WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW DOUBLE LINE)
 - TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT



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USER NAME = jkjel1man	DESIGNED -	REVISED -
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	DATE -	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

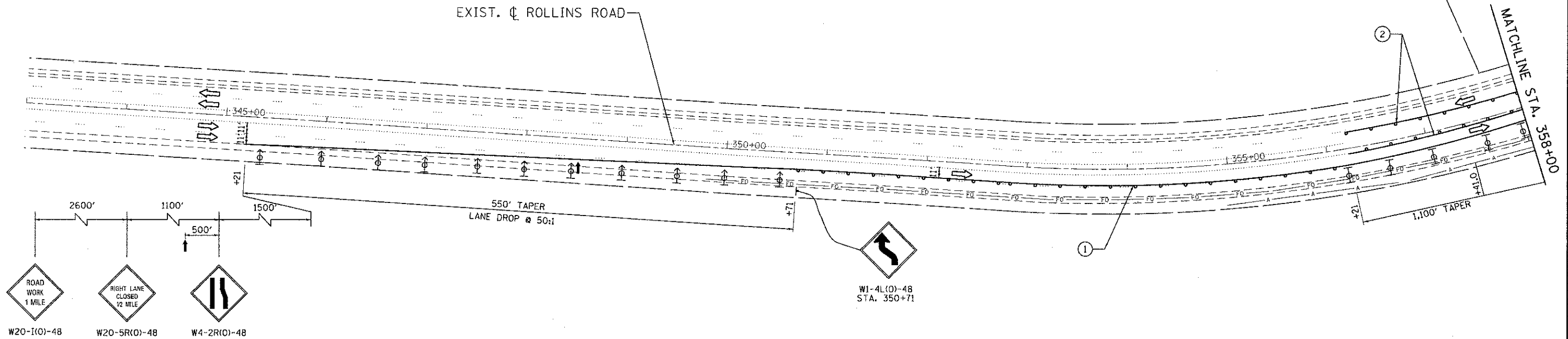
**STAGES OF CONSTRUCTION - STAGE 1
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE. 181	SECTION 12-F3000-01-BT	COUNTY LAKE	TOTAL SHEETS 118	SHEET NO. 27
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

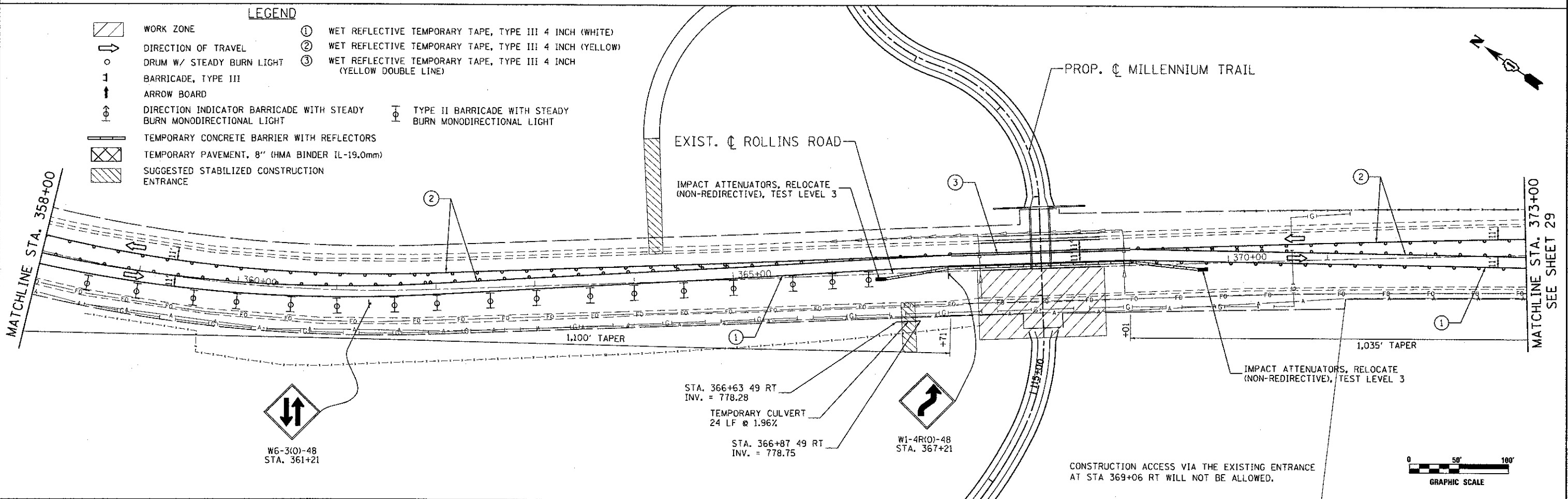
NOTES:

1. SPACING OF ALL DRUMS AND BARRICADES ALONG ROLLINS ROAD SHALL BE AT 50' CENTER TO CENTER.
2. FLEXIBLE DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH IDOT STANDARD 701431.



LEGEND

- WORK ZONE
- DIRECTION OF TRAVEL
- DRUM W/ STEADY BURN LIGHT
- BARRICADE, TYPE III
- ARROW BOARD
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER WITH REFLECTORS
- TEMPORARY PAVEMENT, 8" (HMA BINDER IL-19.0mm)
- SUGGESTED STABILIZED CONSTRUCTION ENTRANCE
- ① WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (WHITE)
- ② WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW)
- ③ WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW DOUBLE LINE)
- TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT



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USER NAME: jkellman	DESIGNED: -	REVISED: -
PLOT SCALE: 1/8" = 100.0000' / 1"	DRAWN: -	REVISED: -
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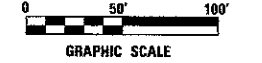
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**STAGES OF CONSTRUCTION - STAGE 2
 ROLLINS ROAD UNDERPASS**

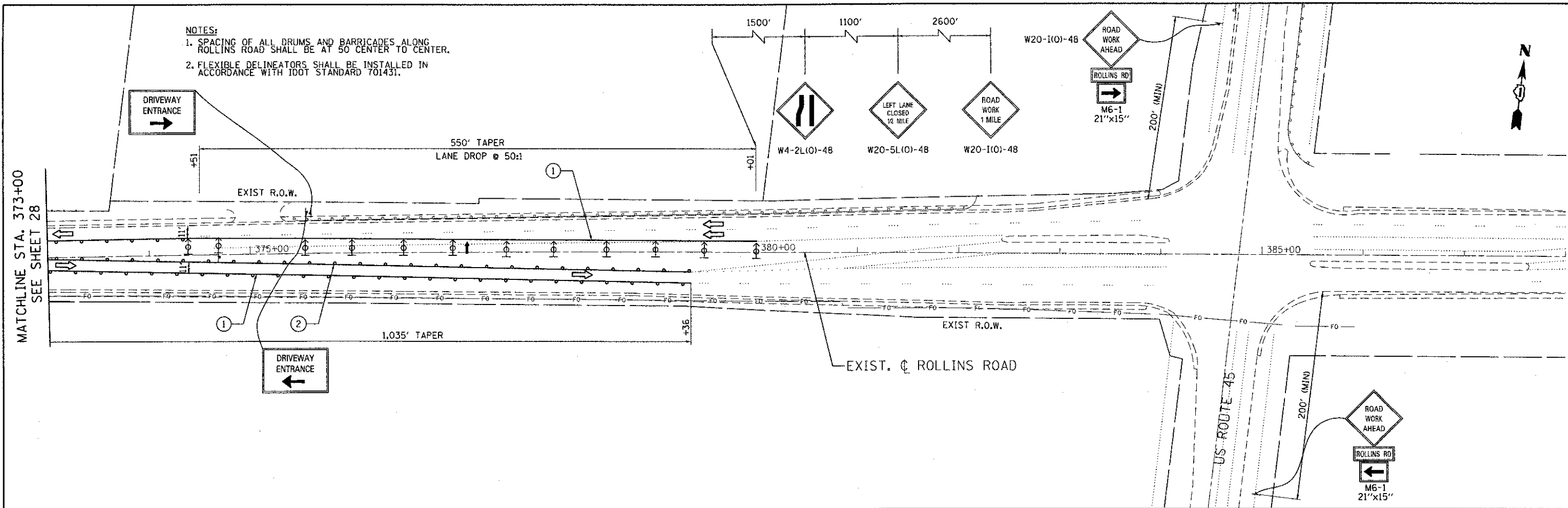
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	28
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				CONTRACT NO. 63807

CONSTRUCTION ACCESS VIA THE EXISTING ENTRANCE AT STA 369+06 RT WILL NOT BE ALLOWED.



NOTES:
 1. SPACING OF ALL DRUMS AND BARRICADES ALONG ROLLINS ROAD SHALL BE AT 50' CENTER TO CENTER.
 2. FLEXIBLE DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH IDOT STANDARD 701431.



LEGEND

- WORK ZONE
- DIRECTION OF TRAVEL
- DRUM W/ STEADY BURN LIGHT
- BARRICADE, TYPE III
- ARROW BOARD
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER WITH REFLECTORS
- TEMPORARY PAVEMENT, 8" (HMA BINDER IL-19.0mm)
- SUGGESTED STABILIZED CONSTRUCTION ENTRANCE
- ① WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (WHITE)
- ② WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW)
- ③ WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH (YELLOW DOUBLE LINE)
- TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT



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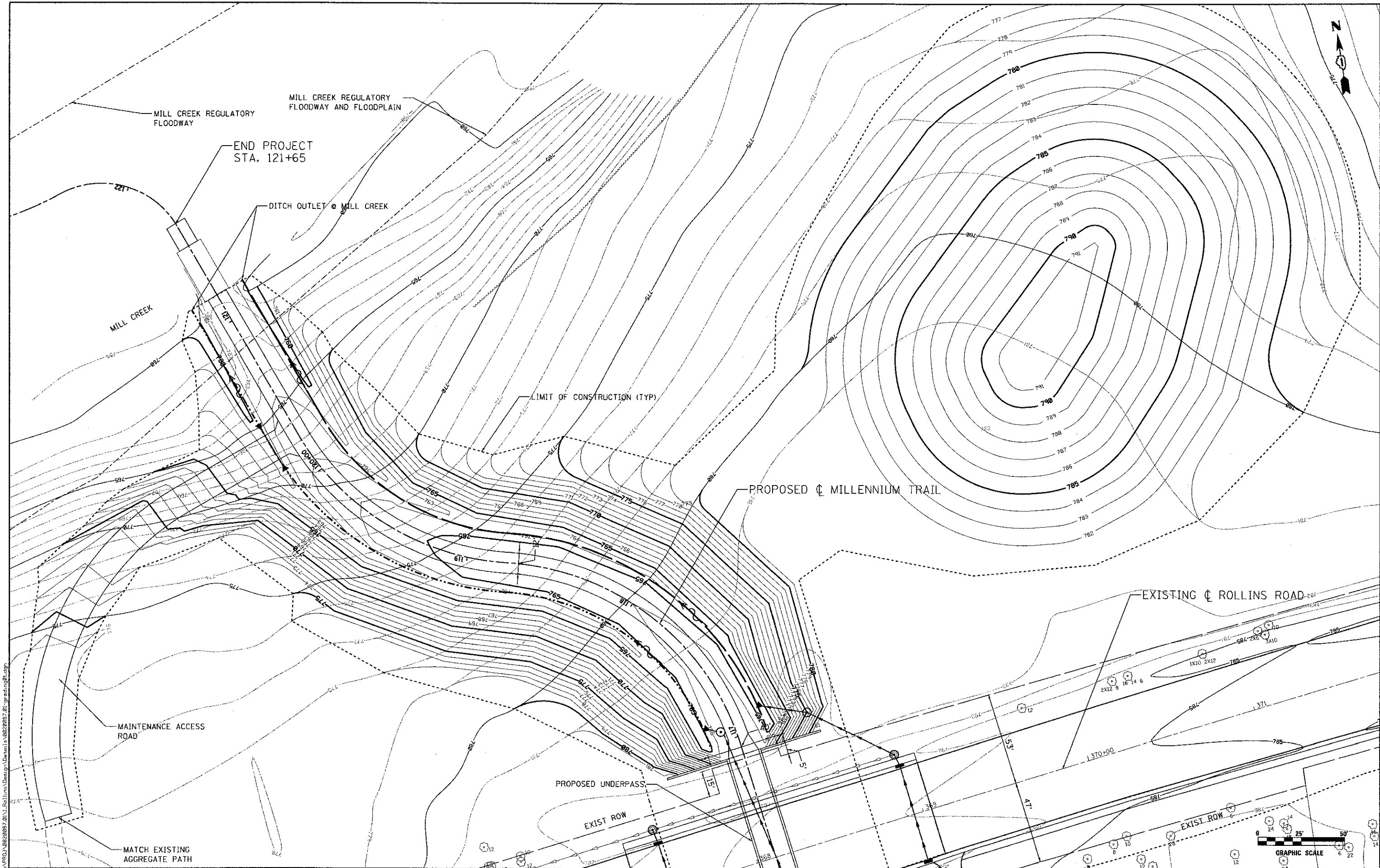
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	DATE -	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**STAGES OF CONSTRUCTION - STAGE 2
 ROLLINS ROAD UNDERPASS**

SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	29
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



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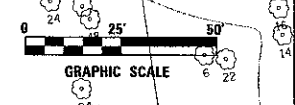
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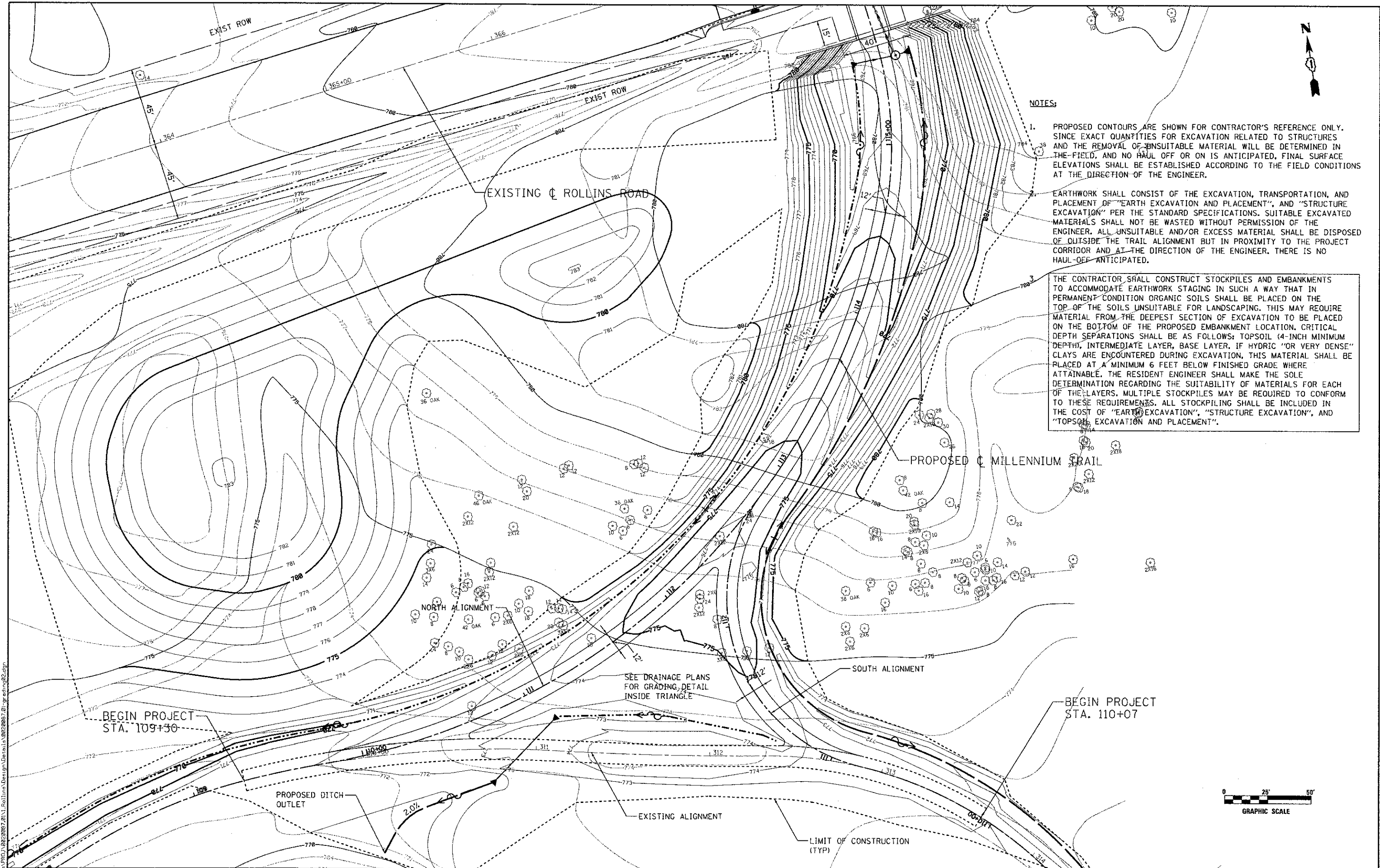
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**GRADING PLAN (NORTH) - MILLENNIUM TRAIL
 ROLLINS ROAD UNDERPASS**

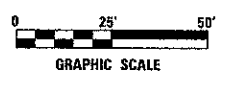
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	30
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				





- NOTES:**
1. PROPOSED CONTOURS ARE SHOWN FOR CONTRACTOR'S REFERENCE ONLY. SINCE EXACT QUANTITIES FOR EXCAVATION RELATED TO STRUCTURES AND THE REMOVAL OF UNSUITABLE MATERIAL WILL BE DETERMINED IN THE FIELD, AND NO HAUL OFF OR ON IS ANTICIPATED, FINAL SURFACE ELEVATIONS SHALL BE ESTABLISHED ACCORDING TO THE FIELD CONDITIONS AT THE DIRECTION OF THE ENGINEER.
 2. EARTHWORK SHALL CONSIST OF THE EXCAVATION, TRANSPORTATION, AND PLACEMENT OF "EARTH EXCAVATION AND PLACEMENT", AND "STRUCTURE EXCAVATION" PER THE STANDARD SPECIFICATIONS. SUITABLE EXCAVATED MATERIALS SHALL NOT BE WASTED WITHOUT PERMISSION OF THE ENGINEER. ALL UNSUITABLE AND/OR EXCESS MATERIAL SHALL BE DISPOSED OF OUTSIDE THE TRAIL ALIGNMENT BUT IN PROXIMITY TO THE PROJECT CORRIDOR AND AT THE DIRECTION OF THE ENGINEER. THERE IS NO HAUL-OFF ANTICIPATED.
 3. THE CONTRACTOR SHALL CONSTRUCT STOCKPILES AND EMBANKMENTS TO ACCOMMODATE EARTHWORK STAGING IN SUCH A WAY THAT IN PERMANENT CONDITION ORGANIC SOILS SHALL BE PLACED ON THE TOP OF THE SOILS UNSUITABLE FOR LANDSCAPING. THIS MAY REQUIRE MATERIAL FROM THE DEEPEST SECTION OF EXCAVATION TO BE PLACED ON THE BOTTOM OF THE PROPOSED EMBANKMENT LOCATION. CRITICAL DEPTH SEPARATIONS SHALL BE AS FOLLOWS: TOPSOIL (4-INCH MINIMUM DEPTH), INTERMEDIATE LAYER, BASE LAYER. IF HYDRIC "OR VERY DENSE" CLAYS ARE ENCOUNTERED DURING EXCAVATION, THIS MATERIAL SHALL BE PLACED AT A MINIMUM 6 FEET BELOW FINISHED GRADE WHERE ATTAINABLE. THE RESIDENT ENGINEER SHALL MAKE THE SOLE DETERMINATION REGARDING THE SUITABILITY OF MATERIALS FOR EACH OF THE LAYERS. MULTIPLE STOCKPILES MAY BE REQUIRED TO CONFORM TO THESE REQUIREMENTS. ALL STOCKPILING SHALL BE INCLUDED IN THE COST OF "EARTH EXCAVATION", "STRUCTURE EXCAVATION", AND "TOPSOIL EXCAVATION AND PLACEMENT".



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CONSULTING ENGINEERS
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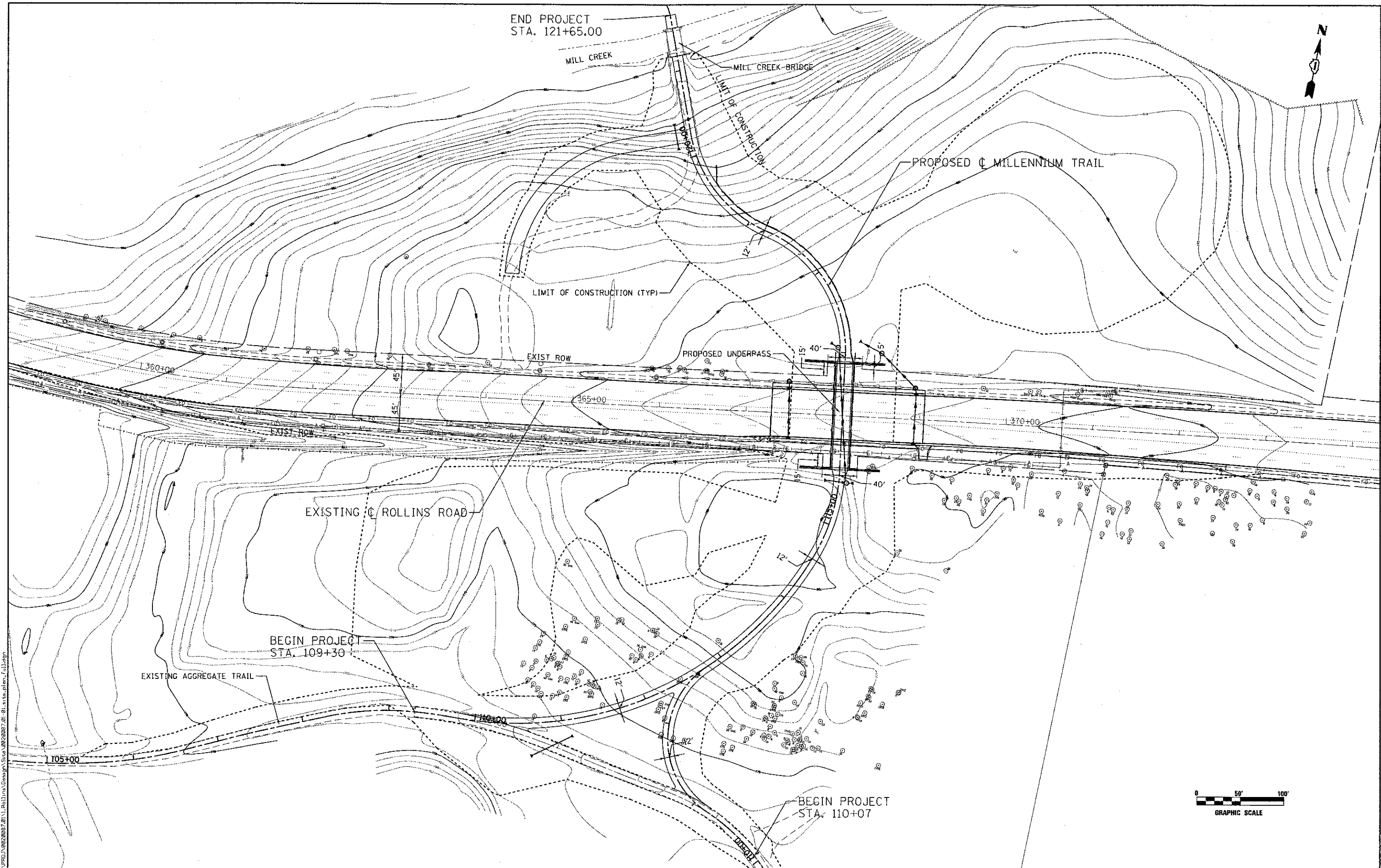
USER NAME = jk.jallman	DESIGNED -	REVISED -
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	DATE -	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

GRADING PLAN (SOUTH) - MILLENNIUM TRAIL
ROLLINS ROAD UNDERPASS

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	31
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



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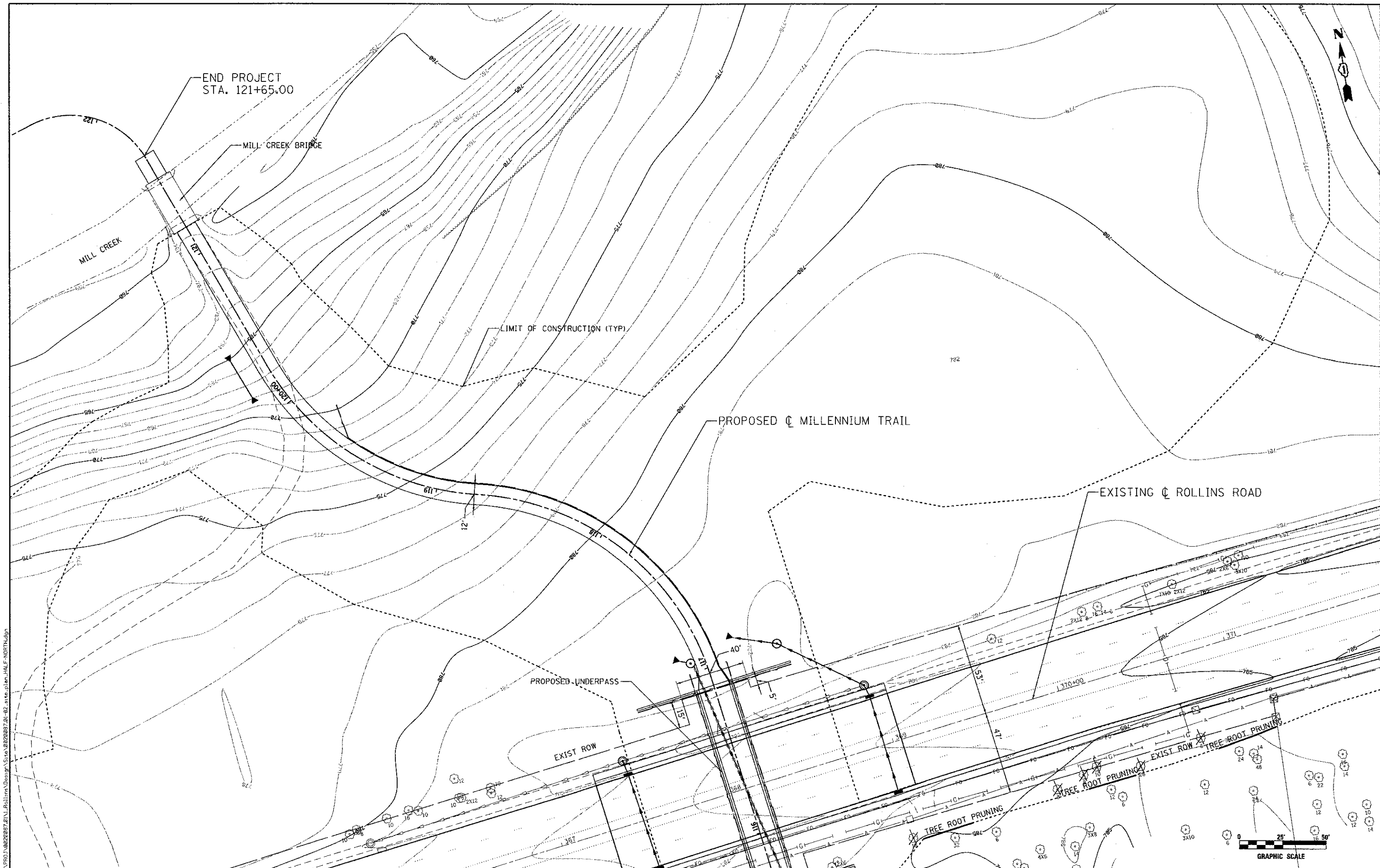
Ciorba Group, Inc.
 CONSULTING ENGINEERS
 9507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60656
 Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jk.jellman	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 4/8/2013	CHECKED -	REVISED -
DATE = 4/8/2013	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

SCALE:			
SHEET NO.	OF SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	32
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				



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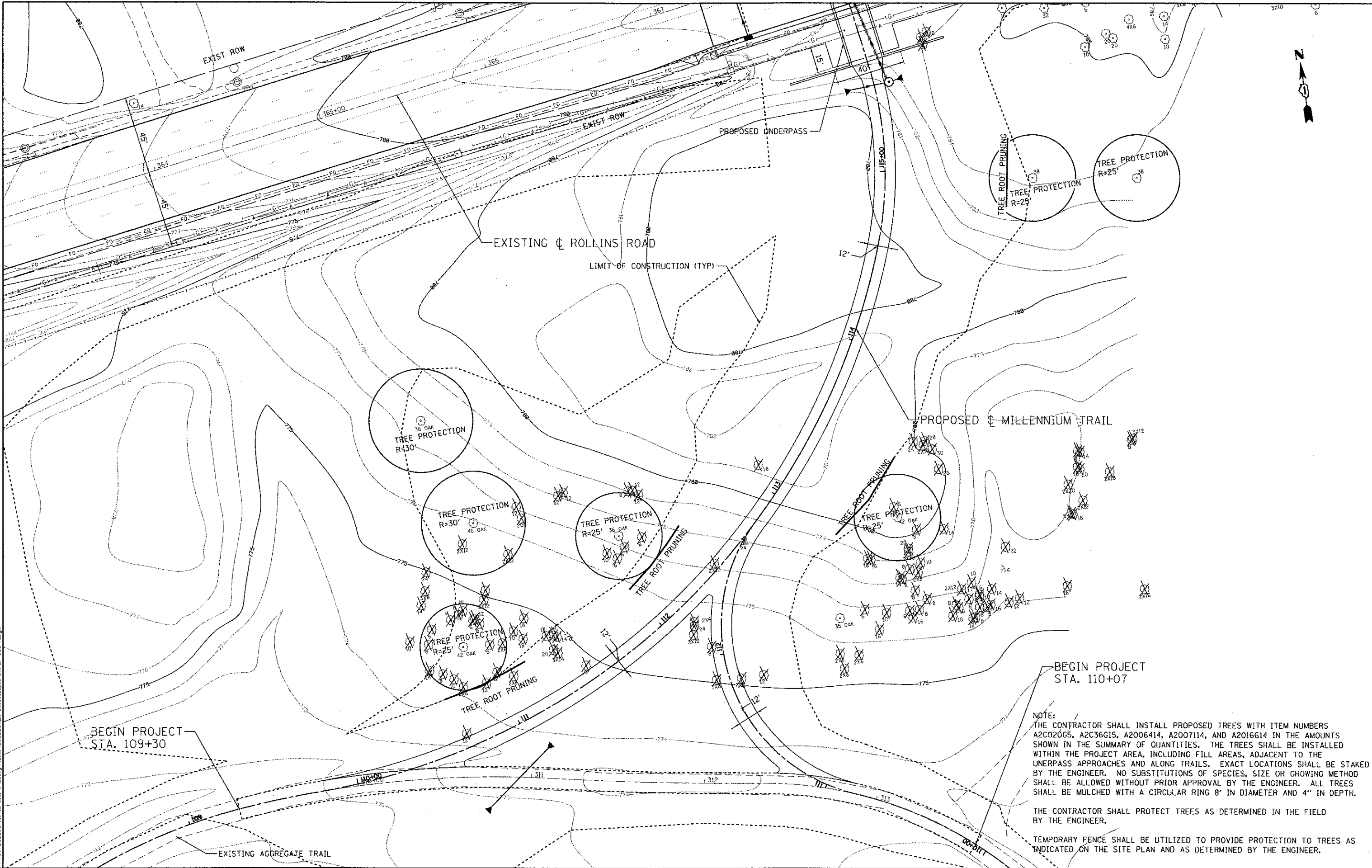
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PLOT DATE = 4/8/2013	CHECKED -	REVISED -
	DATE -	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**SITE PLAN (NORTH) - MILLENNIUM TRAIL
 ROLLINS ROAD UNDERPASS**

SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	33
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				



BEGIN PROJECT
STA. 109+30

BEGIN PROJECT
STA. 110+07

NOTE:
THE CONTRACTOR SHALL INSTALL PROPOSED TREES WITH ITEM NUMBERS A2C020G5, A2C36G15, A2006414, A2007114, AND A2016614 IN THE AMOUNTS SHOWN IN THE SUMMARY OF QUANTITIES. THE TREES SHALL BE INSTALLED WITHIN THE PROJECT AREA, INCLUDING FILL AREAS, ADJACENT TO THE UNDERPASS APPROACHES AND ALONG TRAILS. EXACT LOCATIONS SHALL BE STAKED BY THE ENGINEER. NO SUBSTITUTIONS OF SPECIES, SIZE OR GROWING METHOD SHALL BE ALLOWED WITHOUT PRIOR APPROVAL BY THE ENGINEER. ALL TREES SHALL BE MULCHED WITH A CIRCULAR RING 8' IN DIAMETER AND 4" IN DEPTH.

THE CONTRACTOR SHALL PROTECT TREES AS DETERMINED IN THE FIELD BY THE ENGINEER.

TEMPORARY FENCE SHALL BE UTILIZED TO PROVIDE PROTECTION TO TREES AS INDICATED ON THE SITE PLAN AND AS DETERMINED BY THE ENGINEER.

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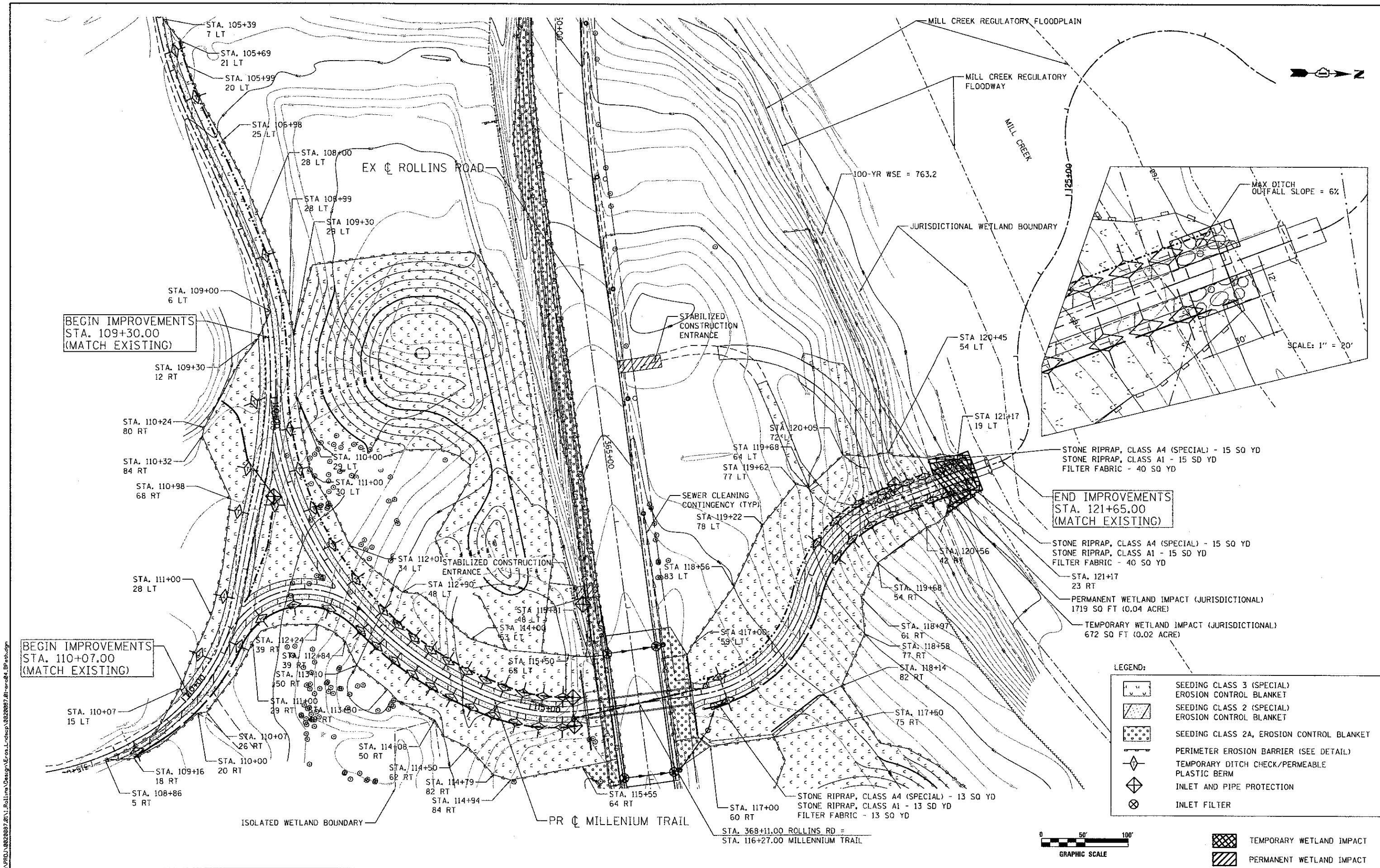
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	DATE -	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**SITE PLAN (SOUTH) - MILLENNIUM TRAIL
ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	34
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	



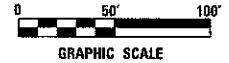
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STA. 109+30.00
(MATCH EXISTING)

BEGIN IMPROVEMENTS
STA. 110+07.00
(MATCH EXISTING)

END IMPROVEMENTS
STA. 121+65.00
(MATCH EXISTING)

- LEGEND:
- SEEDING CLASS 3 (SPECIAL)
EROSION CONTROL BLANKET
 - SEEDING CLASS 2 (SPECIAL)
EROSION CONTROL BLANKET
 - SEEDING CLASS 2A, EROSION CONTROL BLANKET
 - PERIMETER EROSION BARRIER (SEE DETAIL)
 - TEMPORARY DITCH CHECK/PERMEABLE
PLASTIC BERM
 - INLET AND PIPE PROTECTION
 - INLET FILTER

- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT



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Ciorba Group, Inc.
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USER NAME = jrjellman	DESIGNED - DMH	REVISED -
PLOT SCALE = 1/2000.0000''/ft.	DRAWN - DMH	REVISED -
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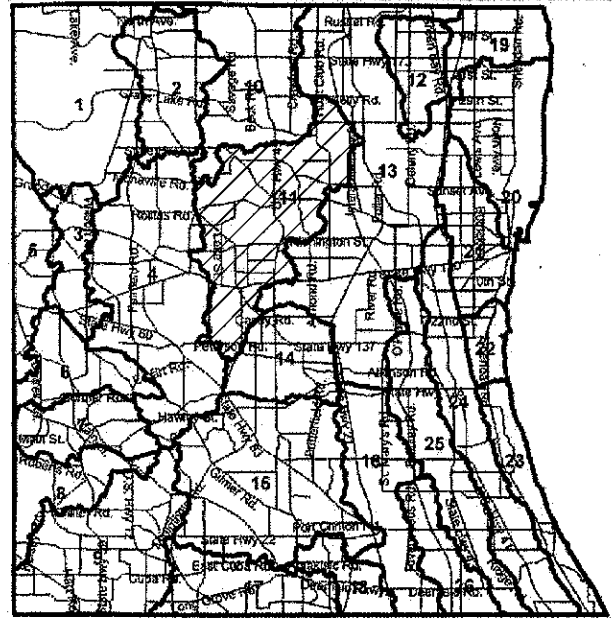
**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**EROSION CONTROL AND LANDSCAPING - MILLENNIUM TRAIL
ROLLINS ROAD UNDERPASS**

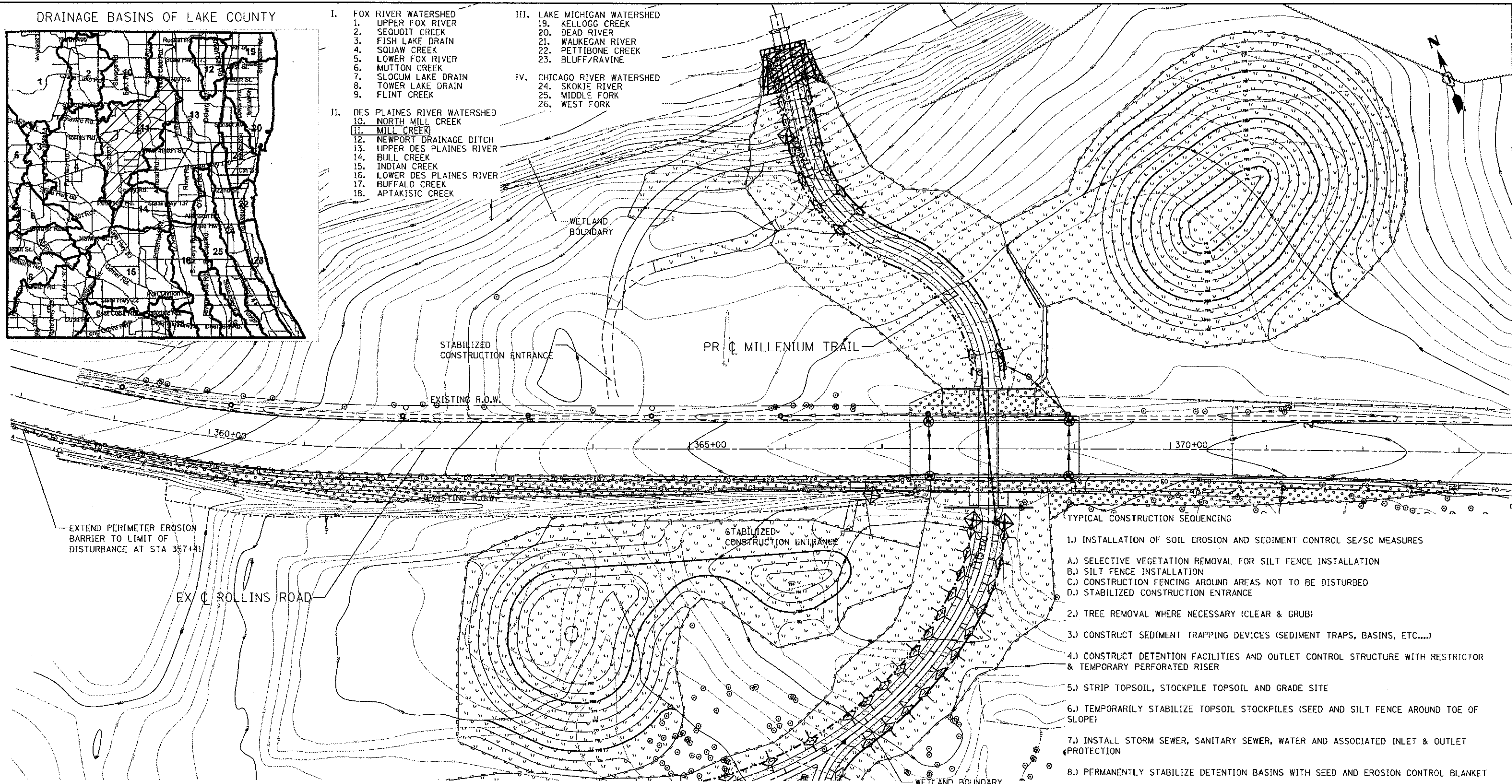
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	35
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				CONTRACT NO. 63807

DRAINAGE BASINS OF LAKE COUNTY



- I. FOX RIVER WATERSHED
 - 1. UPPER FOX RIVER
 - 2. SEQUOIT CREEK
 - 3. FISH LAKE DRAIN
 - 4. SQUAW CREEK
 - 5. LOWER FOX RIVER
 - 6. MUTTON CREEK
 - 7. SLOCUM LAKE DRAIN
 - 8. TOWER LAKE DRAIN
 - 9. FLINT CREEK
- II. DES PLAINES RIVER WATERSHED
 - 10. NORTH MILL CREEK
 - 11. MILL CREEK
 - 12. NEWPORT DRAINAGE DITCH
 - 13. UPPER DES PLAINES RIVER
 - 14. BULL CREEK
 - 15. INDIAN CREEK
 - 16. LOWER DES PLAINES RIVER
 - 17. BUFFALO CREEK
 - 18. APTAKISIC CREEK
- III. LAKE MICHIGAN WATERSHED
 - 19. KELLOGG CREEK
 - 20. DEAD RIVER
 - 21. WAUKEGAN RIVER
 - 22. PETTIBONE CREEK
 - 23. BLUFF/RAVINE
- IV. CHICAGO RIVER WATERSHED
 - 24. SKOKIE RIVER
 - 25. MIDDLE FORK
 - 26. WEST FORK



- TYPICAL CONSTRUCTION SEQUENCING
- 1.) INSTALLATION OF SOIL EROSION AND SEDIMENT CONTROL SE/SC MEASURES
 - A.) SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION
 - B.) SILT FENCE INSTALLATION
 - C.) CONSTRUCTION FENCING AROUND AREAS NOT TO BE DISTURBED
 - D.) STABILIZED CONSTRUCTION ENTRANCE
 - 2.) TREE REMOVAL WHERE NECESSARY (CLEAR & GRUB)
 - 3.) CONSTRUCT SEDIMENT TRAPPING DEVICES (SEDIMENT TRAPS, BASINS, ETC....)
 - 4.) CONSTRUCT DETENTION FACILITIES AND OUTLET CONTROL STRUCTURE WITH RESTRICTOR & TEMPORARY PERFORATED RISER
 - 5.) STRIP TOPSOIL, STOCKPILE TOPSOIL AND GRADE SITE
 - 6.) TEMPORARILY STABILIZE TOPSOIL STOCKPILES (SEED AND SILT FENCE AROUND TOE OF SLOPE)
 - 7.) INSTALL STORM SEWER, SANITARY SEWER, WATER AND ASSOCIATED INLET & OUTLET PROTECTION
 - 8.) PERMANENTLY STABILIZE DETENTION BASINS WITH SEED AND EROSION CONTROL BLANKET
 - 9.) TEMPORARILY STABILIZE ALL AREAS INCLUDING LOTS THAT HAVE REACHED TEMPORARY GRADE
 - 10.) INSTALL ROADWAYS
 - 11.) PERMANENTLY STABILIZE ALL OUTLOT AREAS
 - 12.) INSTALL STRUCTURES AND GRADE INDIVIDUAL LOTS
 - 13.) PERMANENTLY STABILIZE LOTS AND INSTALL PERMEABLE PLASTIC BERMS
 - 14.) REMOVE ALL TEMPORARY SE/SC MEASURES AFTER THE SITE IS STABILIZED WITH VEGETATION
- SOIL EROSION AND SEDIMENT CONTROL MAINTENANCE MUST OCCUR EVERY TWO WEEKS AND AFTER EVERY 1/2" OR GREATER RAINFALL EVENT

LEGEND:

	SEEDING CLASS 3 (SPECIAL) EROSION CONTROL BLANKET
	SEEDING CLASS 2 (SPECIAL) EROSION CONTROL BLANKET
	SEEDING CLASS 2A, EROSION CONTROL BLANKET
	PERIMETER EROSION BARRIER (SEE DETAIL)
	TEMPORARY DITCH CHECK/PERMEABLE PLASTIC BERM
	INLET AND PIPE PROTECTION
	INLET FILTER

GENERAL NOTES:

- 1.) SILT FENCE SHALL MEET THE APPLICABLE STANDARDS OF AASHTO 288-00 (ARTICLE IV, SECTION B.1.J.1.F.1, AS AMENDED), OR EQUIVALENT.
- 2.) INLET FILTERS SHALL BE USED ALONG ROLLINS ROAD. INLET AND PIPE PROTECTION SHALL BE USED FOR FLARED END SECTIONS ALONG THE PROPOSED MILLENNIUM TRAIL.



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USER NAME = jk.jellman	DESIGNED -	REVISED -
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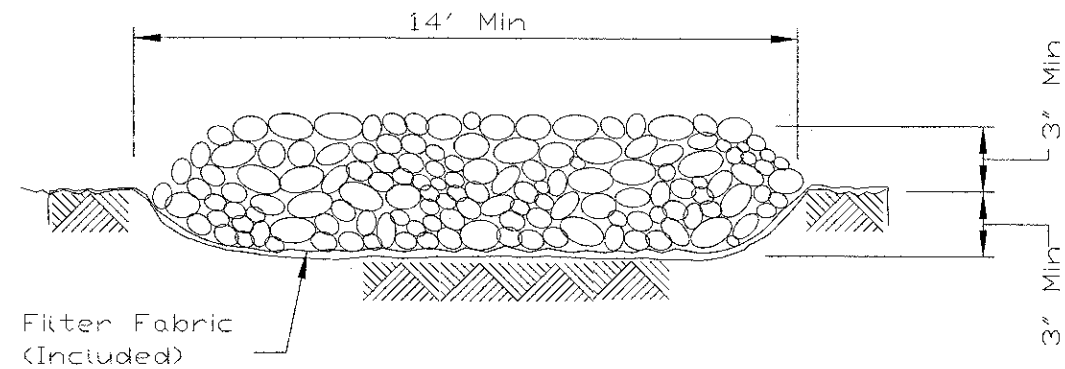
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

EROSION CONTROL AND LANDSCAPING - ROLLINS ROAD			
ROLLINS ROAD UNDERPASS			
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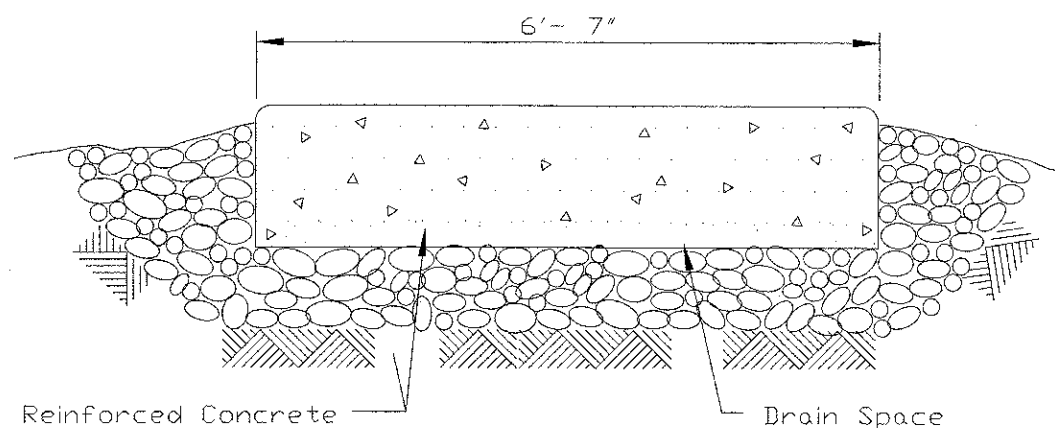
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	36
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

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STABILIZED CONSTRUCTION ENTRANCE PLAN



SECTION A-A



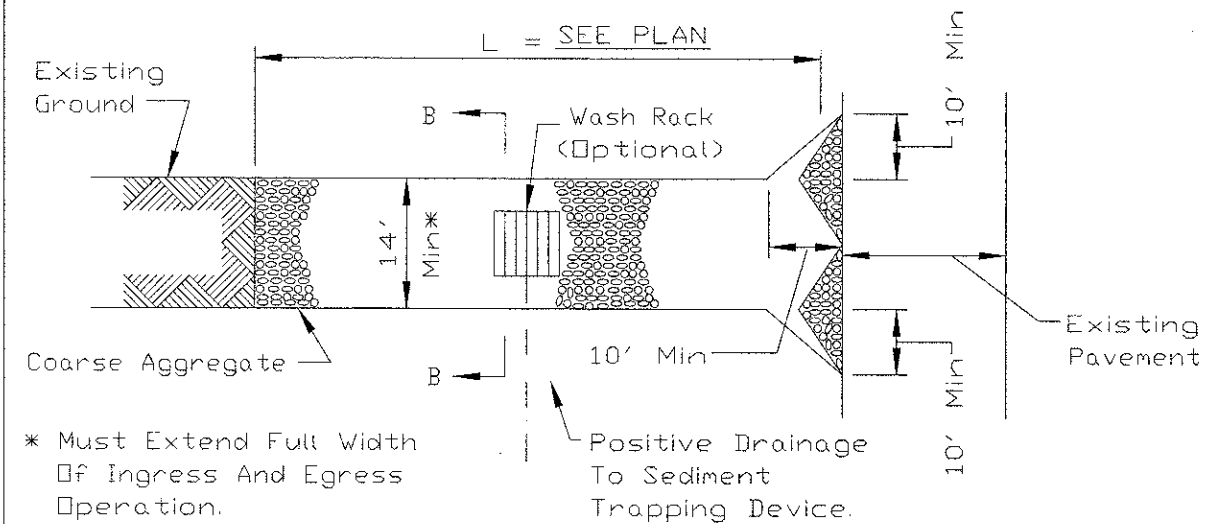
SECTION B-B

REFERENCE
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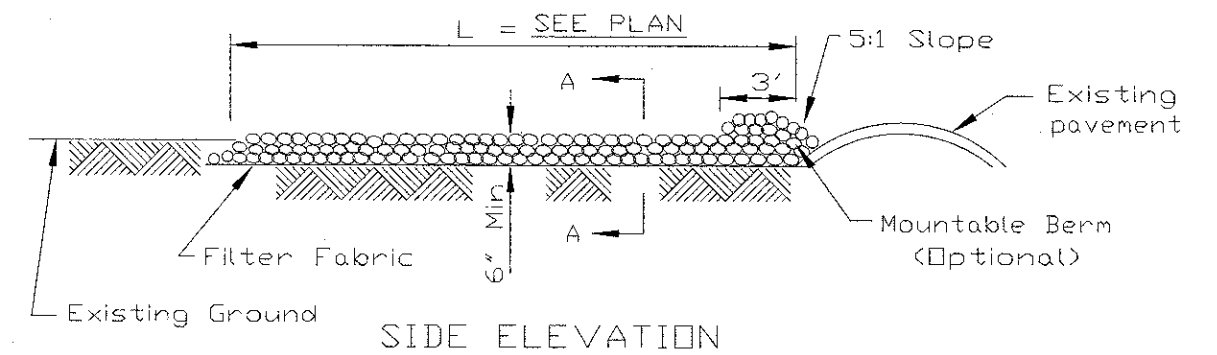


STANDARD DWG. NO.
 IL-630
 SHEET 2 OF 2
 DATE 8-18-94

STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN VIEW



SIDE ELEVATION

NOTES:

- 1 Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
- 2 Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
- 3 Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
- 4 If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE
 Project _____
 Designed _____ Date _____
 Checked _____ Date _____
 Approved _____ Date _____



STANDARD DWG. NO.
 IL-630
 SHEET 1 OF 2
 DATE 8-18-94

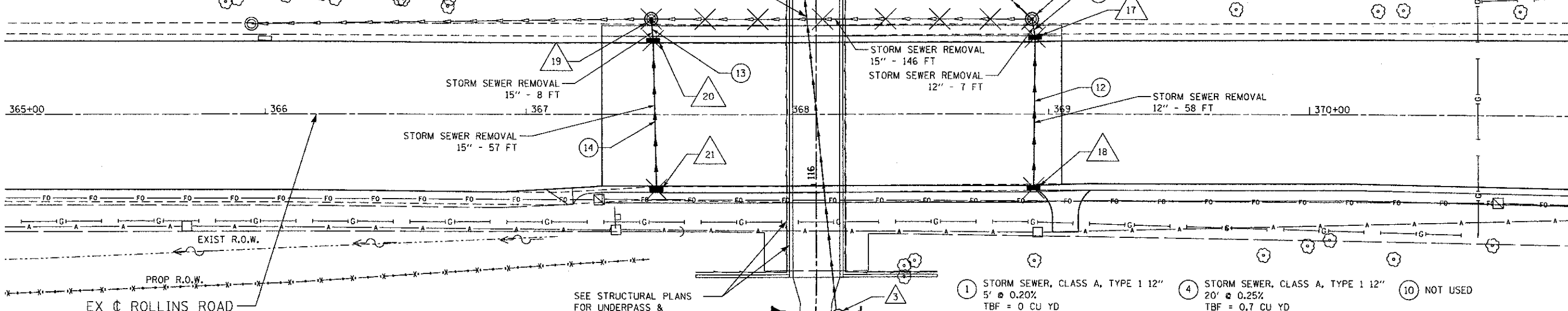
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	37
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

- 1 STA. 367+95 82.77 LT
PRECAST REINFORCED CONCRETE FLARED END SECTION 12"
INV. = 764.38
- 2 STA. 368+02 78.52 LT
MANHOLES, TYPE A, 4'-DIAMETER WITH SPECIAL FRAME, CLOSED LID
RIM = 766.50
INV. = 764.39
- 3 STA. 368+19 77.35 RT
MANHOLES, TYPE A, 4'-DIAMETER WITH SPECIAL FRAME, CLOSED LID
RIM = 767.27
INV. = 765.40

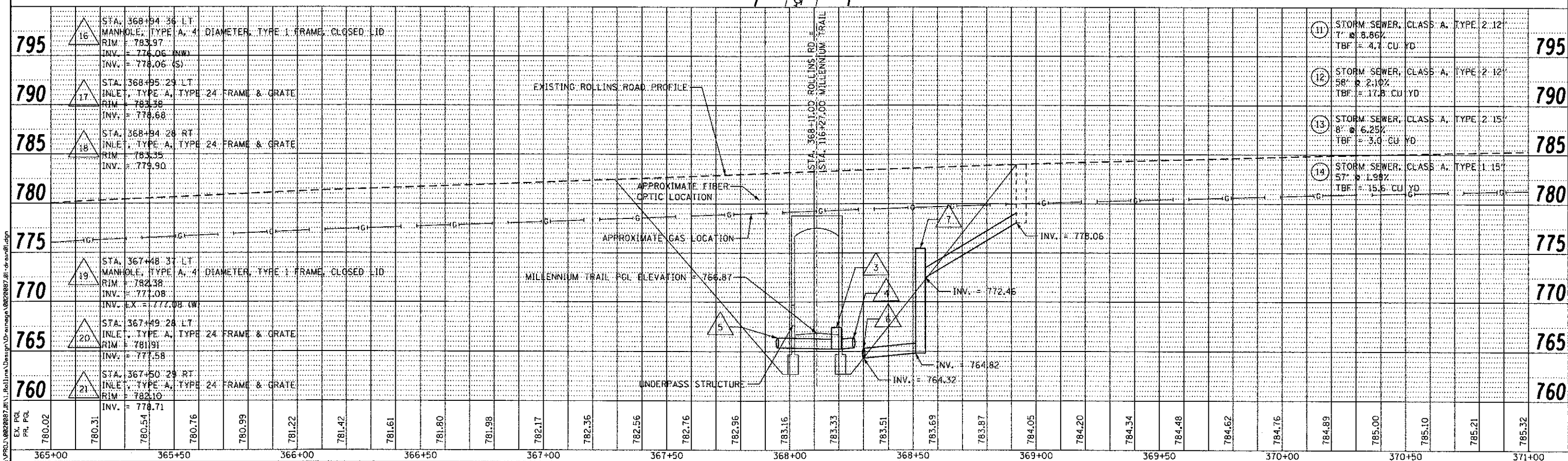
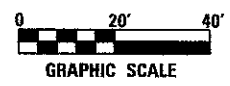
- 4 STA. 368+26 77.25 RT
PRECAST REINFORCED CONCRETE FLARED END SECTION 12"
INV. = 765.15
- 5 STA. 367+95 75.39 LT
PRECAST REINFORCED CONCRETE FLARED END SECTION 12"
INV. = 765.15
- 6 STA. 368+30 85.26 LT
PRECAST REINFORCED CONCRETE FLARED END SECTION 12"
INV. = 764.32



- 7 STA. 368+53 74.00 LT
MANHOLE, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID
RIM = 775.46
INV. = 772.46 (E)
INV. = 764.82 (W)

- 14 NOT USED
- 15 NOT USED

- 1 STORM SEWER, CLASS A, TYPE 1 12"
5' @ 0.20%
TBF = 0 CU YD
- 2 STORM SEWER, CLASS A, TYPE 1 12"
152' @ 0.46%
TBF = 14.3 CU YD
- 3 STORM SEWER, CLASS A, TYPE 1 12"
5' @ 1.00%
TBF = 0 CU YD
- 4 STORM SEWER, CLASS A, TYPE 1 12"
20' @ 0.25%
TBF = 0.7 CU YD
- 5 STORM SEWER, CLASS A, TYPE 2 12"
56' @ 6.43%
TBF = 0 CU YD
- 6 STORM SEWER, CLASS A, TYPE 2 12"
25' @ 2.00%
TBF = 0 CU YD
- 10 NOT USED



795	790	785	780	775	770	765	760
16	17	18	19	20	21		
STA. 368+94 36.17 LT MANHOLE, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID RIM = 783.97 INV. = 774.06 (NW) INV. = 778.06 (S)	STA. 368+95 29.17 LT INLET, TYPE A, TYPE 24 FRAME & GRATE RIM = 783.58 INV. = 778.68	STA. 368+94 24.17 RT INLET, TYPE A, TYPE 24 FRAME & GRATE RIM = 783.35 INV. = 779.90	STA. 367+48 31.17 LT MANHOLE, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID RIM = 782.38 INV. = 777.08 INV. EX = 777.08 (W)	STA. 367+49 28.17 LT INLET, TYPE A, TYPE 24 FRAME & GRATE RIM = 781.91 INV. = 777.58	STA. 367+50 29.17 RT INLET, TYPE A, TYPE 24 FRAME & GRATE RIM = 782.10 INV. = 778.71		
11	12	13	14				
STORM SEWER, CLASS A, TYPE 2 12" 7' @ 8.86% TBF = 4.7 CU YD	STORM SEWER, CLASS A, TYPE 2 12" 58' @ 2.10% TBF = 17.3 CU YD	STORM SEWER, CLASS A, TYPE 2 15" 8' @ 6.25% TBF = 3.0 CU YD	STORM SEWER, CLASS A, TYPE 1 15" 57' @ 1.98% TBF = 15.6 CU YD				

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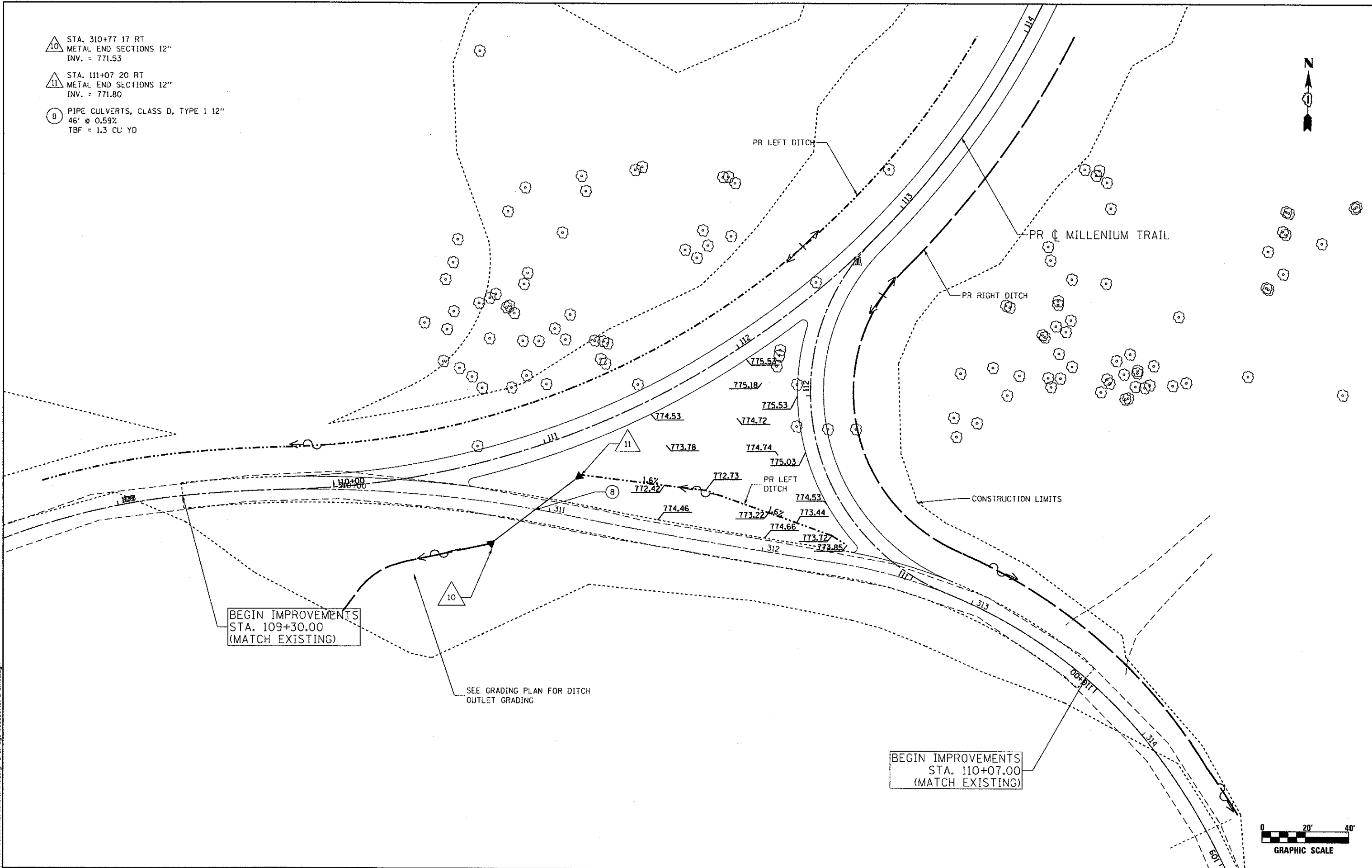
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	DATE -	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

DRAINAGE PLAN - MILLENNIUM TRAIL ROLLINS ROAD UNDERPASS	
SCALE:	SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
181	12-F3000-01-BT	LAKE	118 38
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807

- △ 10 STA. 310+77 17 RT
METAL END SECTIONS 12"
INV. = 771.53
- △ 11 STA. 111+07 20 RT
METAL END SECTIONS 12"
INV. = 771.80
- ⊗ 8 PIPE CULVERTS, CLASS D, TYPE 1 12"
46' @ 0.59%
TBF = 1.3 CU YD



BEGIN IMPROVEMENTS
STA. 109+30.00
(MATCH EXISTING)

BEGIN IMPROVEMENTS
STA. 110+07.00
(MATCH EXISTING)



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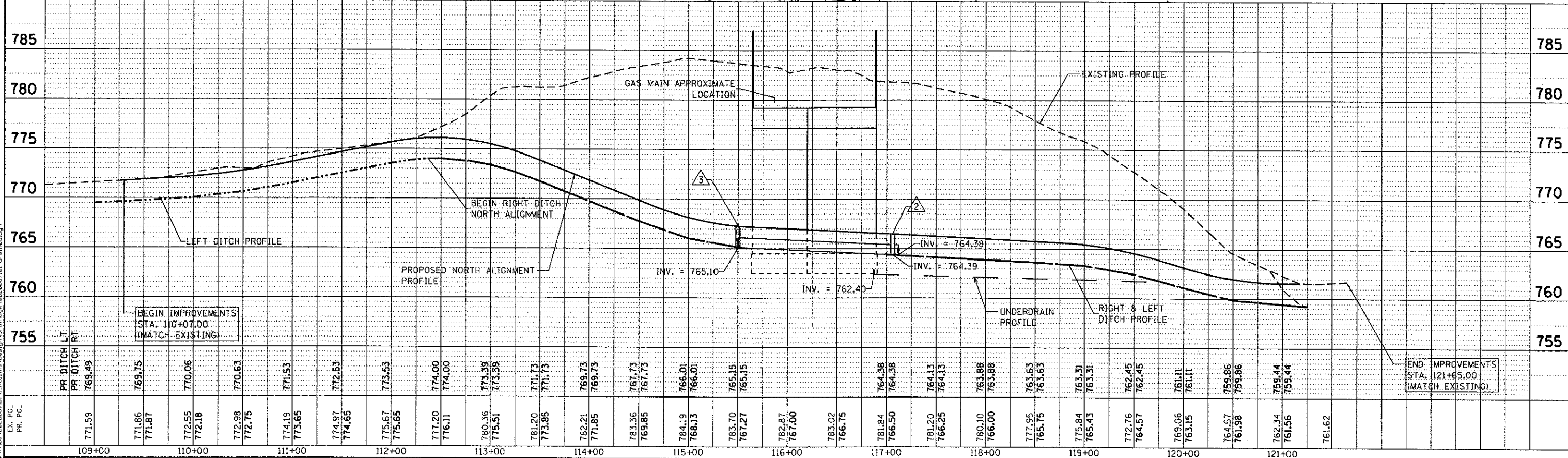
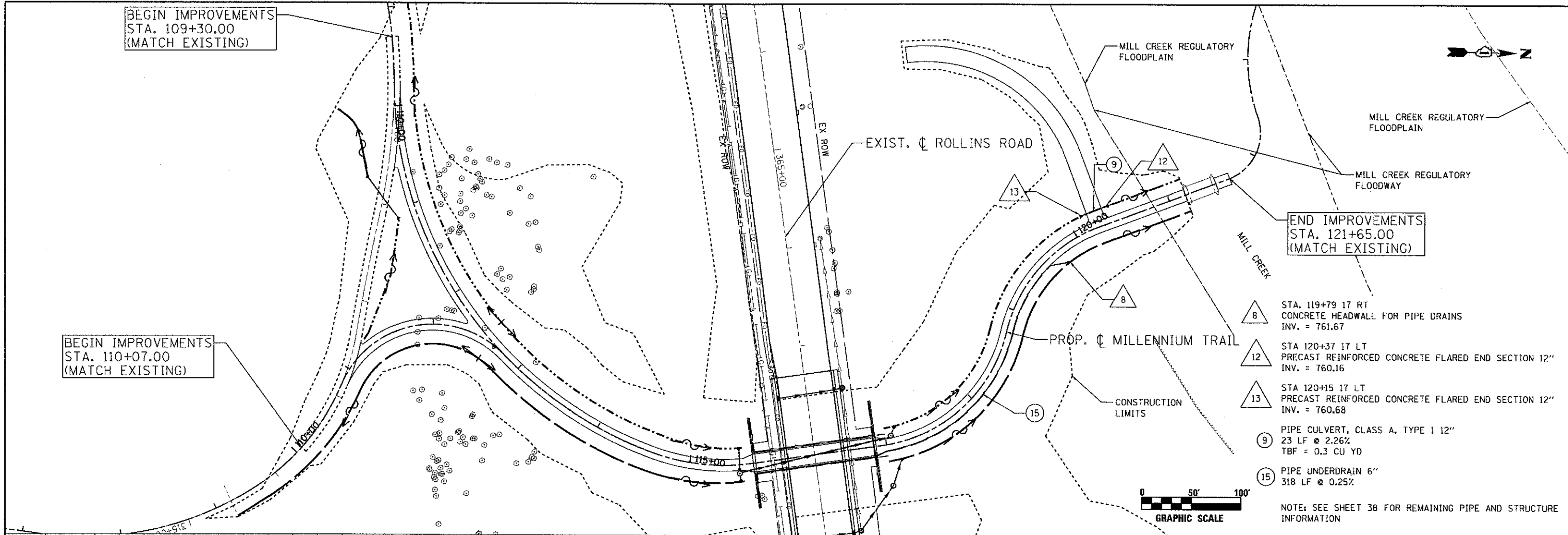
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USER NAME = jk.jellman	DESIGNED - DMM	REVISED -
PLOT SCALE = 480.0000' / Ft.	DRAWN - DMM	REVISED -
PLOT DATE = 4/8/2013	CHECKED - TW	REVISED -
	DATE -	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

DRAINAGE PLAN - MILLENNIUM TRAIL ROLLINS ROAD UNDERPASS	
SCALE:	SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	39
CONTRACT NO. 63807				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



109+00	110+00	111+00	112+00	113+00	114+00	115+00	116+00	117+00	118+00	119+00	120+00	121+00																															
PR DITCH LT	PR DITCH RT	769.49	769.75	770.06	770.63	771.53	772.53	773.53	774.00	774.00	773.39	773.39	771.73	771.73	769.73	769.73	767.73	767.73	766.01	766.01	765.15	765.15	764.38	764.38	764.38	764.38	764.13	764.13	763.88	763.88	763.63	763.63	763.31	763.31	762.45	762.45	761.11	761.11	759.86	759.86	759.44	759.44	761.62

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USER NAME = jk.jellman	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - JLP	REVISED -
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**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

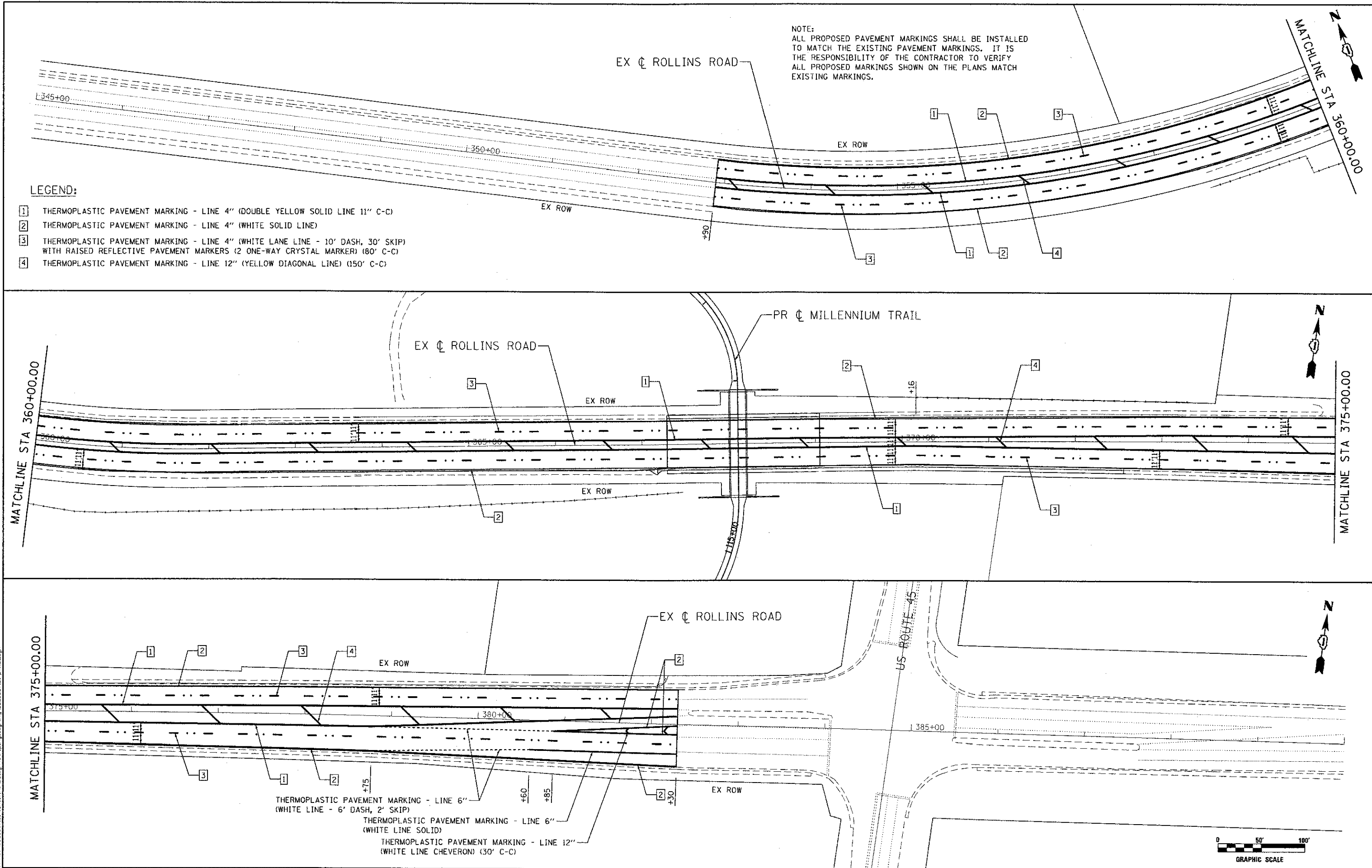
**DRAINAGE PLAN AND PROFILE - MILLENNIUM TRAIL
ROLLINS ROAD UNDERPASS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	40
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

NOTE:
ALL PROPOSED PAVEMENT MARKINGS SHALL BE INSTALLED TO MATCH THE EXISTING PAVEMENT MARKINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL PROPOSED MARKINGS SHOWN ON THE PLANS MATCH EXISTING MARKINGS.

LEGEND:

- 1 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (DOUBLE YELLOW SOLID LINE 11" C-C)
- 2 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE SOLID LINE)
- 3 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE LANE LINE - 10' DASH, 30' SKIP) WITH RAISED REFLECTIVE PAVEMENT MARKERS (2 ONE-WAY CRYSTAL MARKER) (80' C-C)
- 4 THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW DIAGONAL LINE) (150' C-C)



THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE LINE - 6' DASH, 2' SKIP)
 THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE LINE SOLID)
 THERMOPLASTIC PAVEMENT MARKING - LINE 12" (WHITE LINE CHEVERON) (30' C-C)



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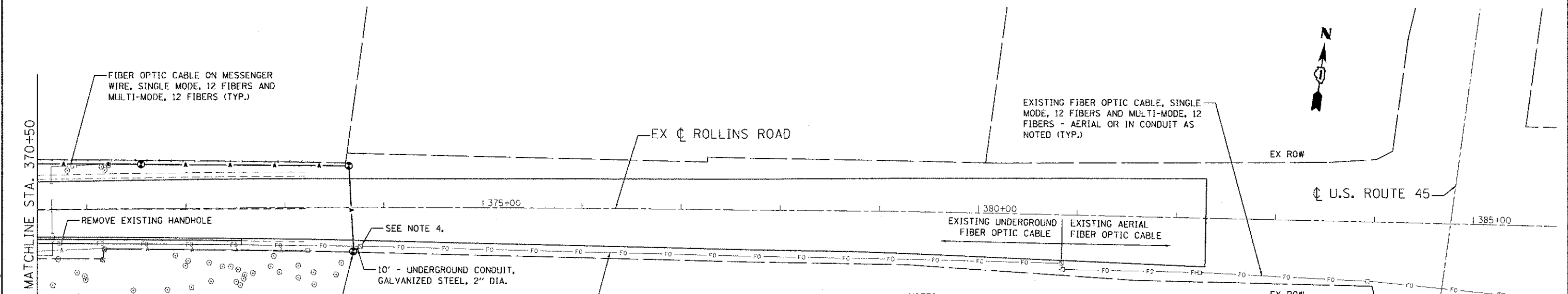
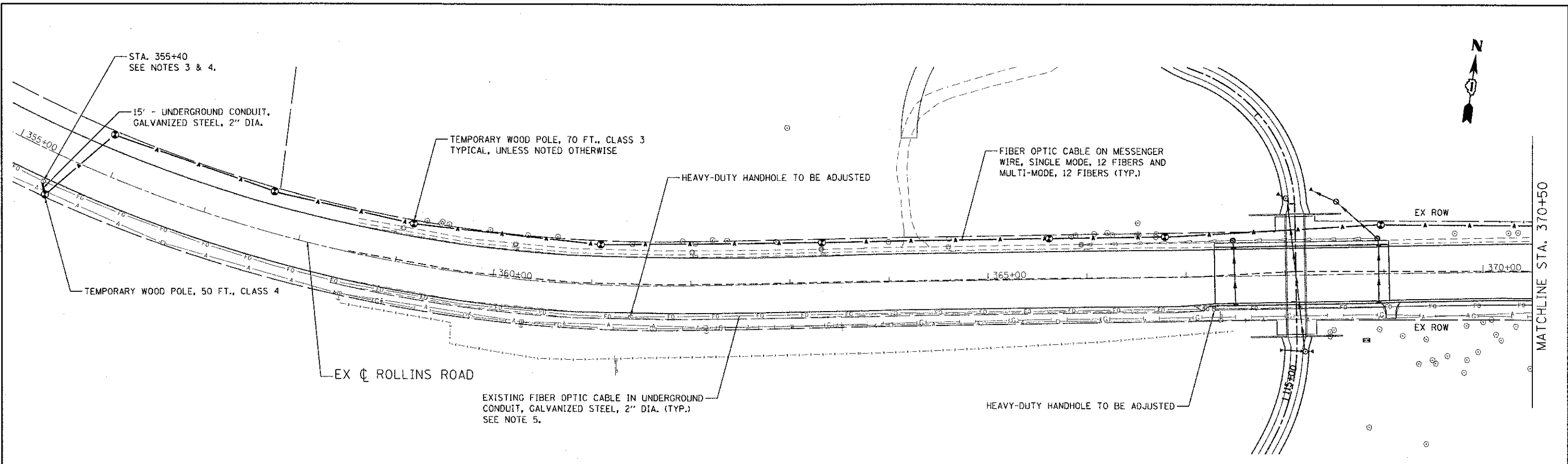
Ciorba Group, Inc.
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 5597 North Cumberland Avenue, Suite 402
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	DATE -	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	41
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



NOTES:

- 1.) FOR THE EXISTING FIBER OPTIC CABLE, DISCONNECT 3 FIBER TERMINATIONS AND REMOVE 21 (9SM + 12MM) FIBER SPLICES. PULL EXISTING 3000' OF FIBER OPTIC CABLE AND 2600' OF TRACER WIRE BACK AND COIL IN HANDHOLE AT STA. 355+40. NOTE THAT A PORTION OF THIS EXISTING CABLE IS AERIAL, THIS WORK SHALL BE INCLUDED IN THE 'TEMPORARY TRAFFIC SIGNAL INTERCONNECTION SYSTEM' PAY ITEM.
- 2.) FOR THE TEMPORARY FIBER OPTIC CONNECTION, COMPLETE 3 FIBER TERMINATIONS AND 21 (9SM + 12MM) FIBER SPLICES.
- 3.) AFTER EXISTING CABLE HAS BEEN COILED IN THE HANDHOLE AT STA. 355+40, COMPLETE 24 (12SM + 12MM) SPLICES BETWEEN EXISTING AND TEMPORARY FIBER OPTIC CABLE.
- 4.) DRILL EXISTING HANDHOLE TO ALLOW INSTALLATION OF UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
- 5.) ROD AND CLEAN EXISTING CONDUIT AFTER REMOVING EXISTING FIBER OPTIC CABLE.

THE FOLLOWING ITEMS OF WORK SHALL BE INCLUDED IN THE TEMPORARY TRAFFIC SIGNAL INTERCONNECTION SYSTEM PAY ITEM. THIS IS NOT A COMPLETE LIST OF THE REQUIRED WORK, JUST A SUMMARY OF THE MAIN WORK ITEMS. SEE THE SPECIAL PROVISION FOR MORE INFORMATION.

- TEMPORARY WOOD POLE, 50 FT., CLASS 4 - 2 EACH
- TEMPORARY WOOD POLE, 70 FT., CLASS 3 - 10 EACH
- SPAN WIRE - 2,000 FEET
- FIBER OPTIC CABLE - 3,250 FEET
- DRILL EXISTING HANDHOLE - 2 EACH
- FIBER OPTIC SPLICES - 45 EACH
- FIBER OPTIC TERMINATIONS - 3 EACH
- REMOVAL OF TEMPORARY INTERCONNECT EQUIPMENT

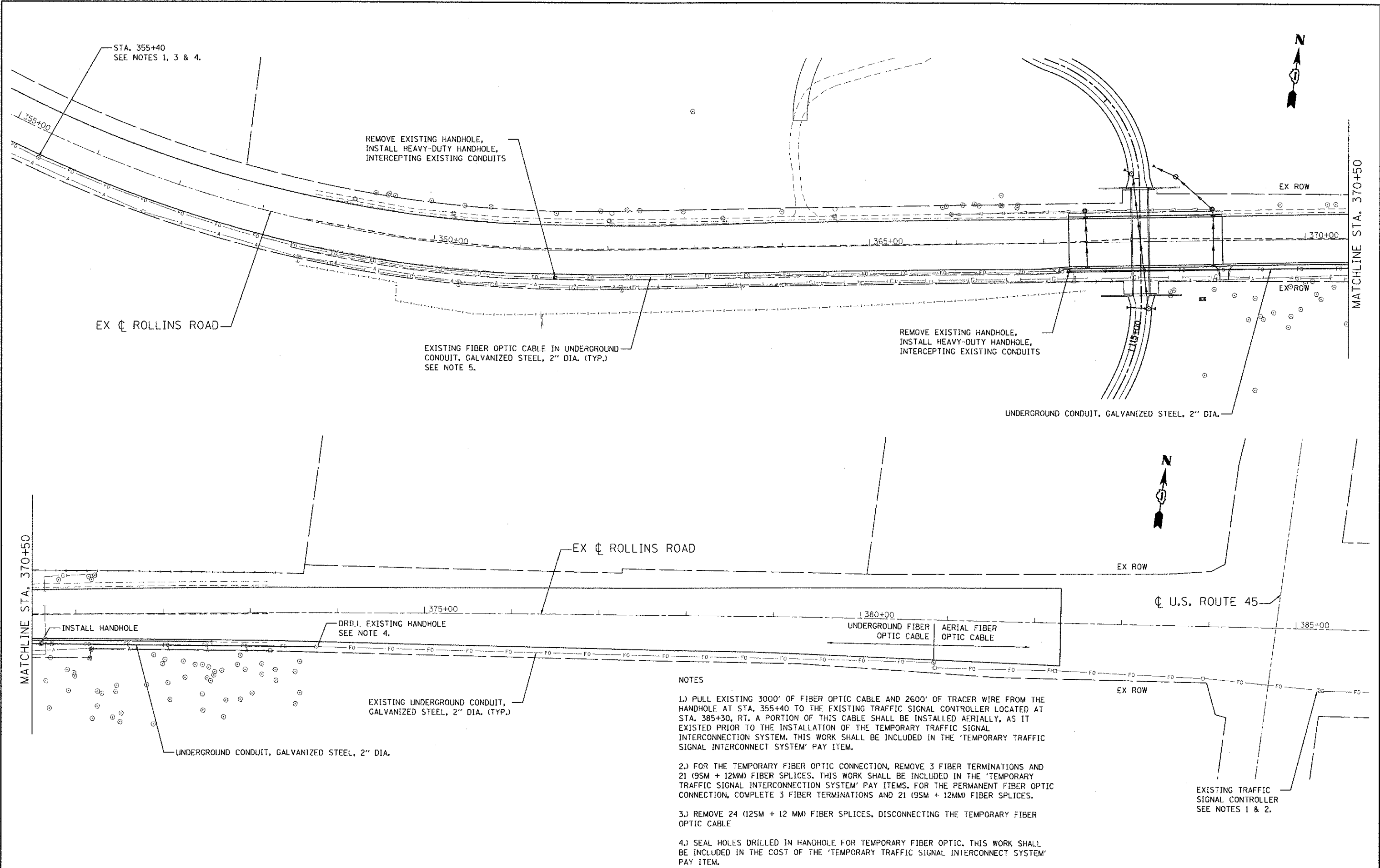
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**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

TEMPORARY INTERCONNECT PLAN ROLLINS ROAD UNDERPASS			
SCALE: 1" = 50'	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	42
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				CONTRACT NO. 63807



NOTES

- 1.) PULL EXISTING 3000' OF FIBER OPTIC CABLE AND 2600' OF TRACER WIRE FROM THE HANDHOLE AT STA. 355+40 TO THE EXISTING TRAFFIC SIGNAL CONTROLLER LOCATED AT STA. 385+30, RT. A PORTION OF THIS CABLE SHALL BE INSTALLED AERIALY, AS IT EXISTED PRIOR TO THE INSTALLATION OF THE TEMPORARY TRAFFIC SIGNAL INTERCONNECTION SYSTEM. THIS WORK SHALL BE INCLUDED IN THE 'TEMPORARY TRAFFIC SIGNAL INTERCONNECT SYSTEM' PAY ITEM.
- 2.) FOR THE TEMPORARY FIBER OPTIC CONNECTION, REMOVE 3 FIBER TERMINATIONS AND 21 (9SM + 12MM) FIBER SPLICES. THIS WORK SHALL BE INCLUDED IN THE 'TEMPORARY TRAFFIC SIGNAL INTERCONNECTION SYSTEM' PAY ITEMS. FOR THE PERMANENT FIBER OPTIC CONNECTION, COMPLETE 3 FIBER TERMINATIONS AND 21 (9SM + 12MM) FIBER SPLICES.
- 3.) REMOVE 24 (12SM + 12 MM) FIBER SPLICES, DISCONNECTING THE TEMPORARY FIBER OPTIC CABLE
- 4.) SEAL HOLES DRILLED IN HANDHOLE FOR TEMPORARY FIBER OPTIC. THIS WORK SHALL BE INCLUDED IN THE COST OF THE 'TEMPORARY TRAFFIC SIGNAL INTERCONNECT SYSTEM' PAY ITEM.

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**INTERCONNECT PLAN
ROLLINS ROAD UNDERPASS**

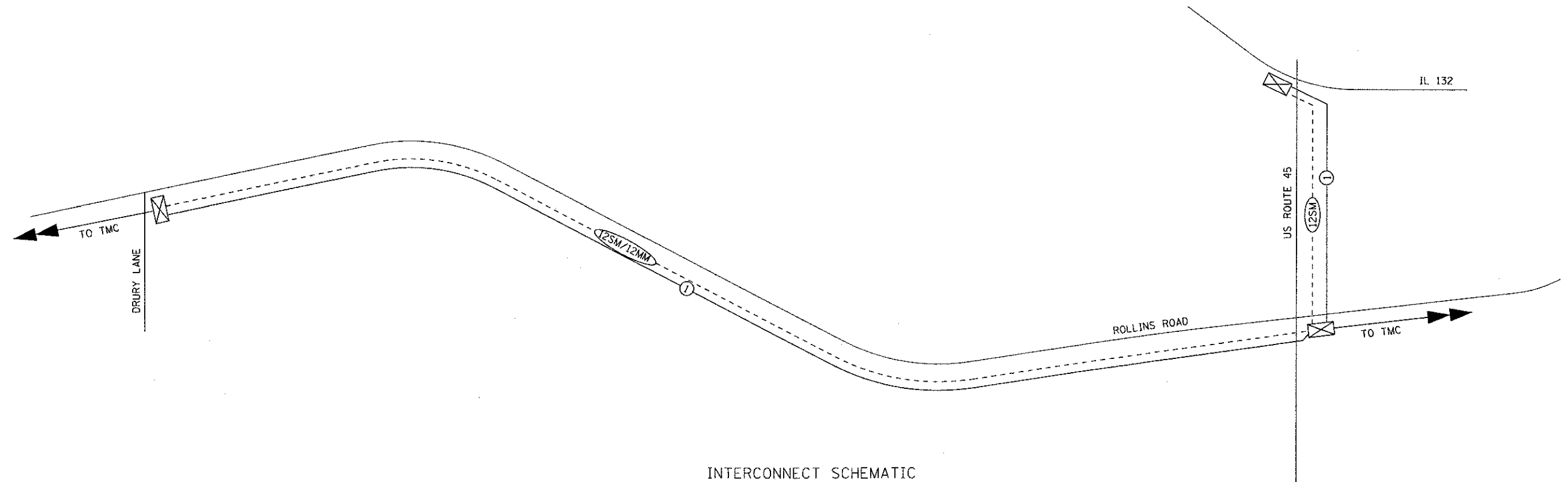
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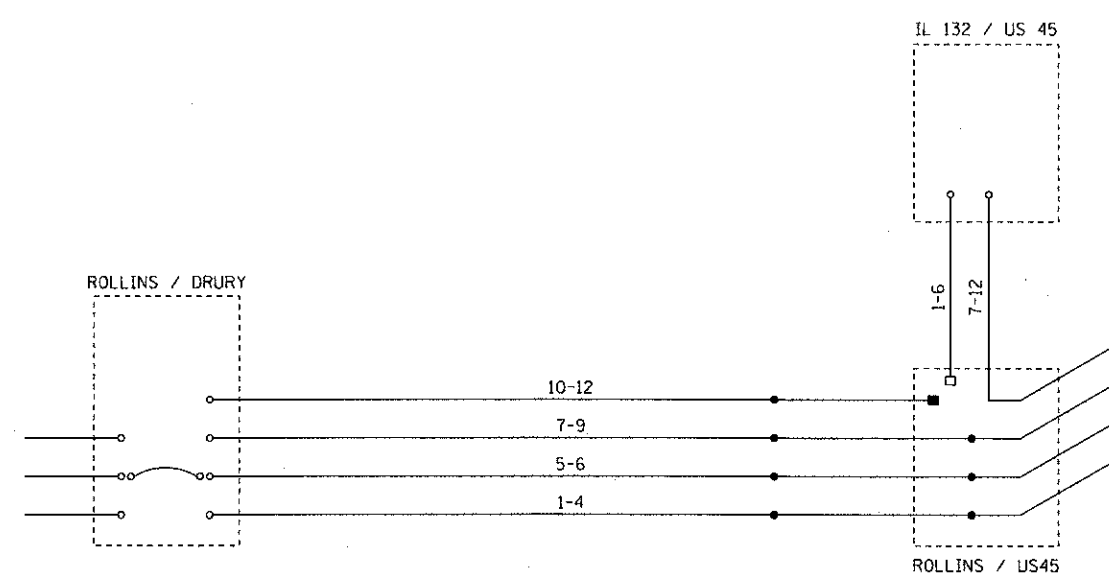
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CONTRACT NO. 63807			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

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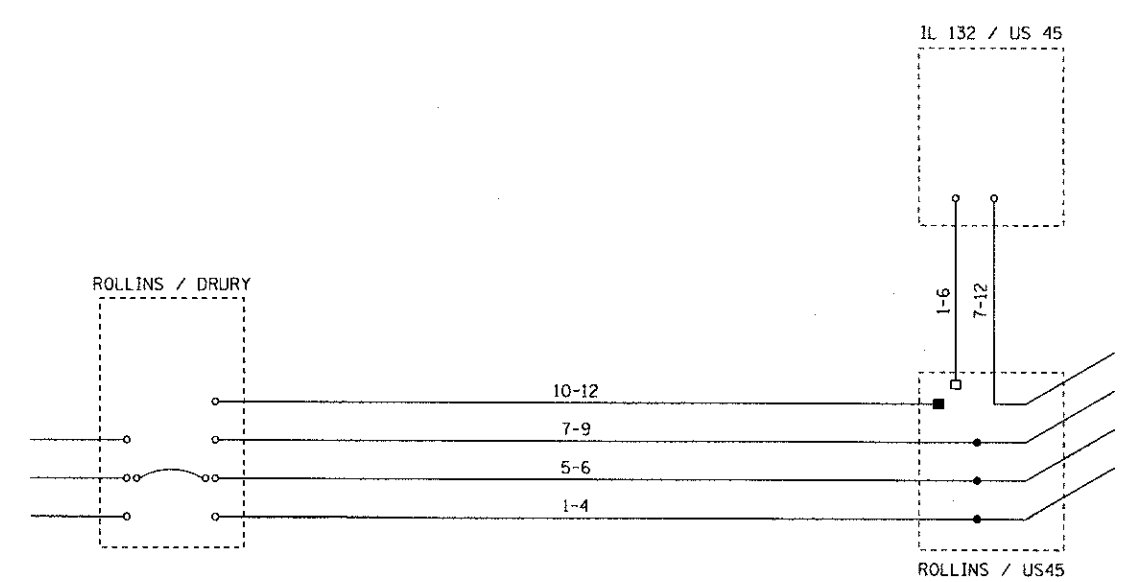
INTERCONNECT SCHEMATIC



TEMPORARY FIBER SPLICING DIAGRAM

NOTE THAT ONLY SINGLE MODE FIBERS ARE SHOWN. MULTI-MODE FIBERS SHALL BE SPLICED AND/OR TERMINATED AS REQUIRED.

- LEGEND:
- EXISTING SPLICE
 - PROPOSED SPLICE
 - EXISTING TERMINATION
 - PROPOSED TERMINATION



PERMANENT FIBER SPLICING DIAGRAM

NOTE THAT ONLY SINGLE MODE FIBERS ARE SHOWN. MULTI-MODE FIBERS SHALL BE SPLICED AND/OR TERMINATED AS REQUIRED.

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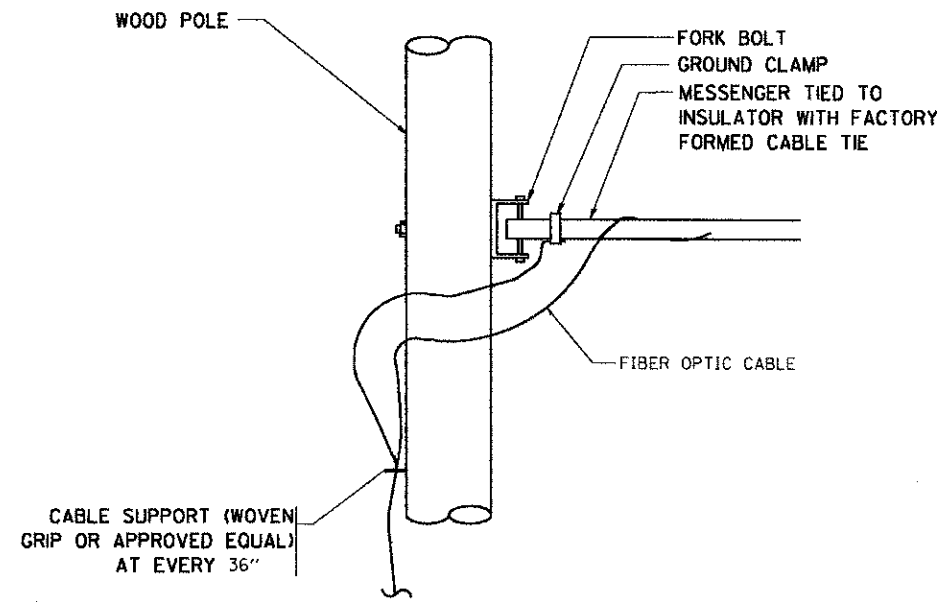
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	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**INTERCONNECT SCHEMATIC AND FIBER SPLICING DIAGRAM
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

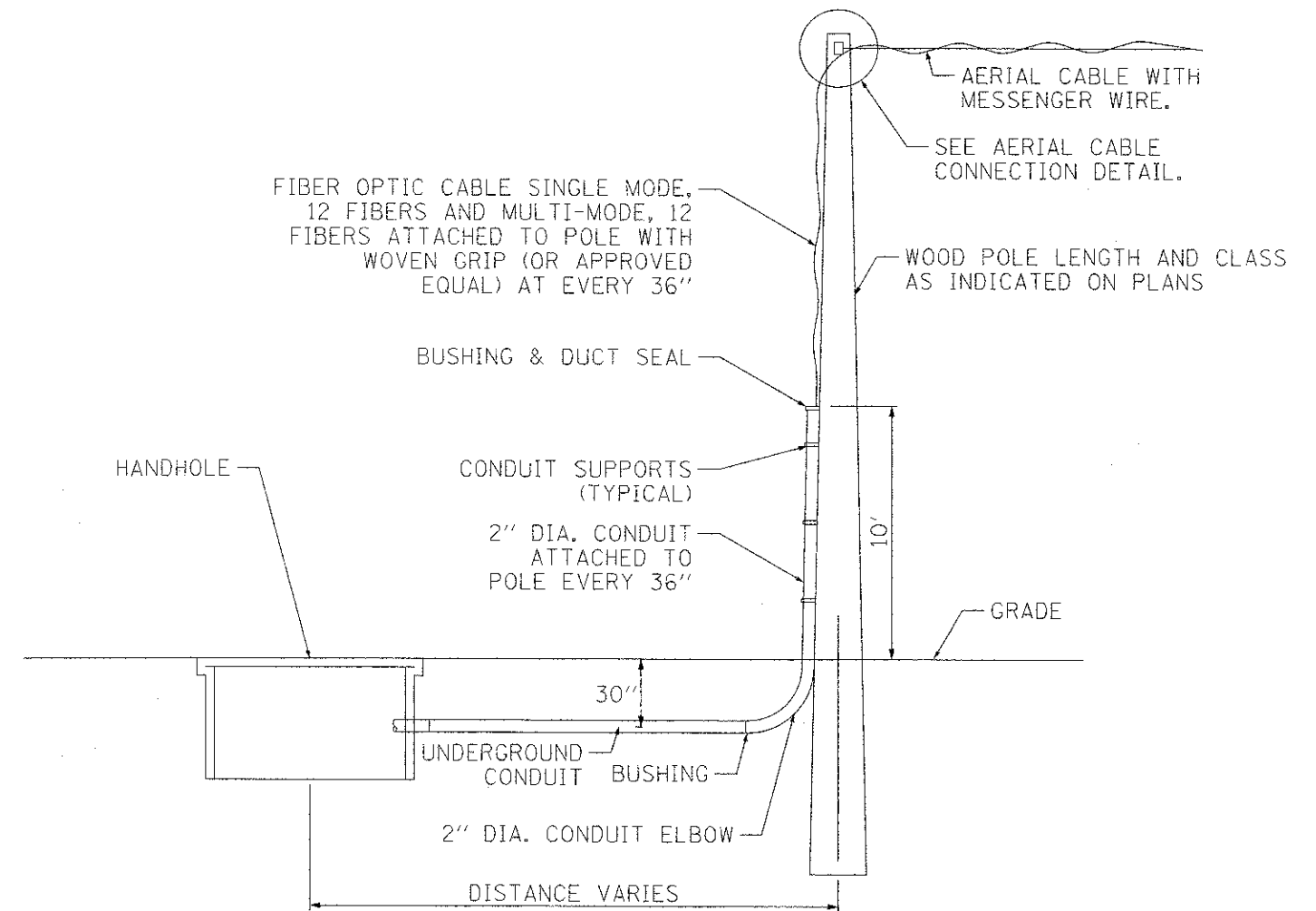
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181	12-F3000-01-BT	LAKE	118	44
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	



AERIAL CABLE CONNECTION DETAIL
N.T.S.

NOTES:

- 1.) SEE PROPOSED INTERCONNECT PLAN FOR CONDUIT AND CABLE ROUTING
- 2.) THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES.
- 3.) COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR TEMPORARY SIGNAL INTERCONNECTION SYSTEM.



WOOD POLE TO HANDHOLE CONNECTION DETAIL
N.T.S.

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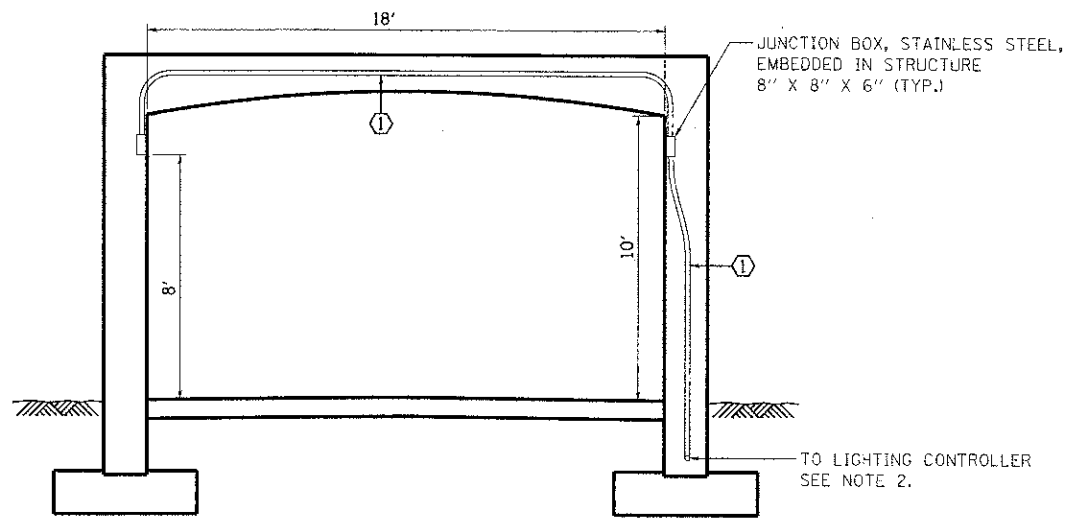
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	DATE - 4/8/2013	REVISED -

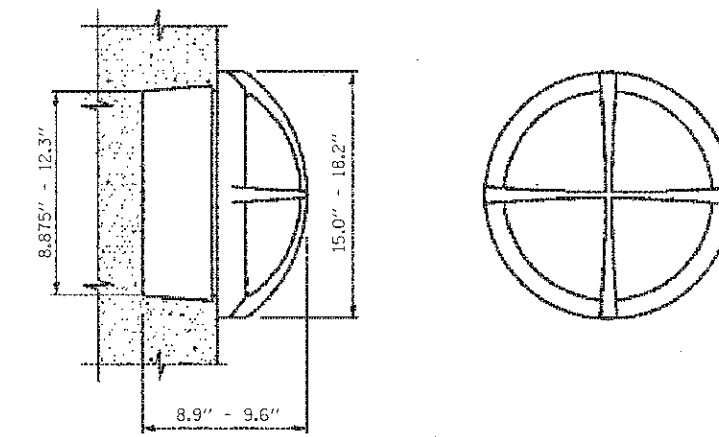
**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

INTERCONNECT DETAILS			
ROLLINS ROAD UNDERPASS			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

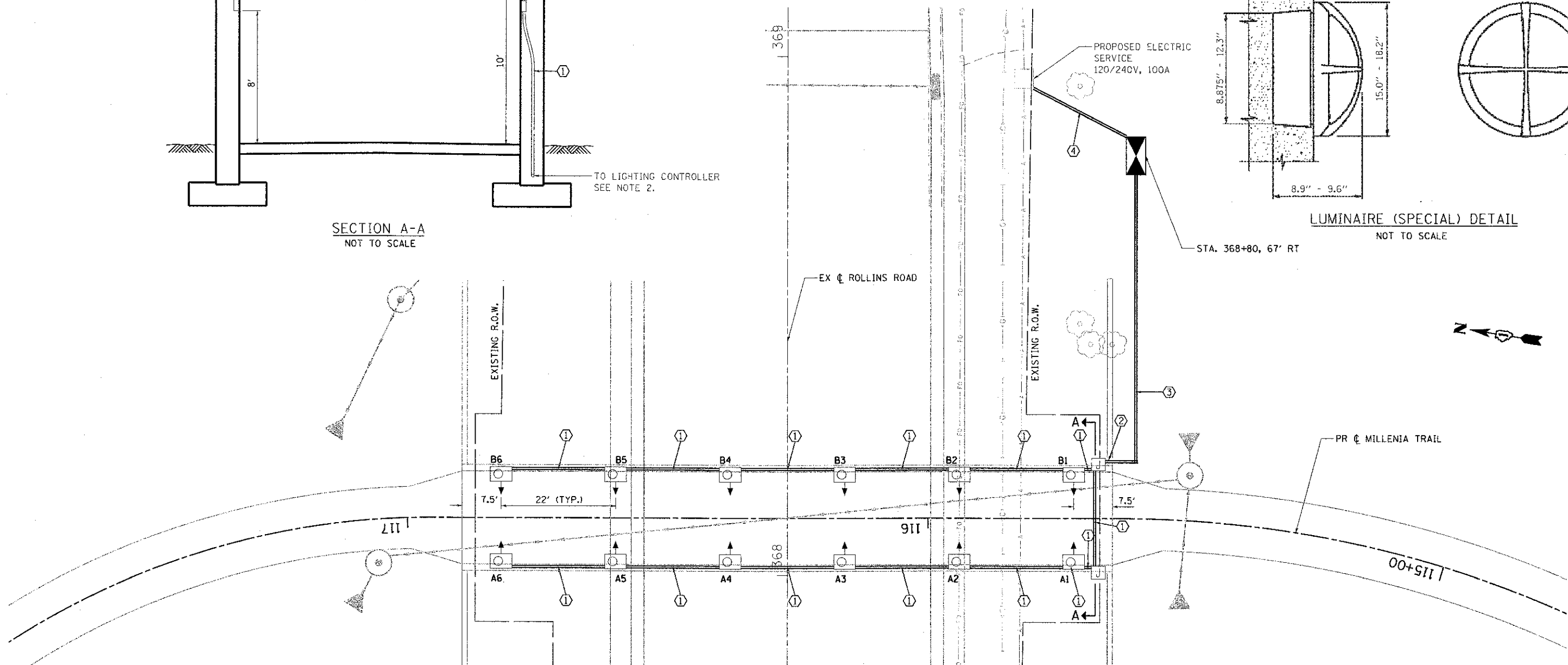
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	45
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	



SECTION A-A
NOT TO SCALE



LUMINAIRE (SPECIAL) DETAIL
NOT TO SCALE



UNDERPASS LUMINAIRE LOCATIONS

LUMINAIRE NO.	STATION	OFFSET
A1	115+72	9' LT
A2	115+94	9' LT
A3	116+16	9' LT
A4	116+38	9' LT
A5	116+60	9' LT
A6	116+82	9' LT
B1	115+72	9' RT
B2	115+94	9' RT
B3	116+16	9' RT
B4	116+38	9' RT
B5	116+60	9' RT
B6	116+82	9' RT

WIRE AND CONDUIT TABLE

TAG	WIRE	CONDUIT
①	2-1/C NO. 10 AND 1/C NO. 10 GROUND	CONDUIT EMBEDDED IN STRUCTURE, 1" DIA., GALVANIZED STEEL
②	3-1/C NO. 10 AND 1/C NO. 10 GROUND	CONDUIT EMBEDDED IN STRUCTURE, 1" DIA., GALVANIZED STEEL
③	3-1/C NO. 10 AND 1/C NO. 10 GROUND	UNDERGROUND CONDUIT, GALVANIZED STEEL, 1" DIA.
④	3-1/C NO. 2	UNDERGROUND CONDUIT, PVC COATED GALVANIZED STEEL, 2 1/2" DIA.

LEGEND

- LUMINAIRE (SPECIAL) - UNDERPASS LUMINAIRE, WALL MOUNTED, 70 WATT METAL HALIDE
- LIGHTING CONTROLLER, SPECIAL
- EXISTING UTILITY POLE
- RIGID STEEL CONDUIT, TYPE AND SIZE AS NOTED
- JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE 8" X 8" X 6"

NOTES

- 1.) ALL LUMINAIRES ARE MOUNTED 8' FROM THE BOTTOM OF THE LUMINAIRE TO THE FINISHED SURFACE OF THE BIKE PATH.
- 2.) CONDUIT SHALL EXIT THE END OF THE UNDERPASS WALL 6" ABOVE THE SPREAD FOOTING. THE CONDUIT SHALL BE ROUTED TO ACHIEVE A 30" DEPTH BEYOND THE UNDERPASS FOUNDATION.

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Ciorba Group, Inc.
CONSULTING ENGINEERS
6607 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel: 773.775.4089 Fax: 773.775.4014

USER NAME = jkajlman	DESIGNED - JMV	REVISED -
PLDT SCALE = 28.0000' / 1"	DRAWN - JMV	REVISED -
PLDT DATE = 4/8/2013	CHECKED - MJL	REVISED -
	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**LIGHTING PLAN
ROLLINS ROAD UNDERPASS**

SCALE: 1" = 10' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	46
CONTRACT NO. 63807			ILLINOIS FED. AID PROJECT	

ASCERTAIN AND ASSURE CLEARANCE FROM UTILITY SECONDARY SPACE, AS APPLICABLE.

UTILITY GROUND CONNECTION, (AS APPLICABLE), BY UTILITY

UTILITY GROUND, AS APPLICABLE, (BY UTILITY)

UTILITY POLE, PRIMARY CUT-OUTS TRANSFORMERS (AS APPLICABLE) BY THE ELECTRIC UTILITY. THE CONTRACTOR SHALL COORDINATE AS REQUIRED.

PROVIDE ADEQUATE SLACK FOR DRIP LOOP AND CONNECTION BY THE UTILITY

NON-METALLIC "U" GUARD. FURNISH FOR INSTALLATION BY ELECTRIC UTILITY. LENGTH AS REQUIRED

CONDUIT/CONDUCTOR SEALING BUSHING, SIZE AND CONDUCTOR CONFIGURATION TO MATCH SERVICE. OZ GEDNEY TYPE CSBG OR APPROVED EQUAL, COMPLETE WITH LOCKING COLLAR (SEE DETAIL)

2-HOLE STRAP FOR RIGID CONDUIT, ZINC PLATED STEEL O.Z. GEDNEY TYPE TH-1800 OR APPROVED EQUAL. ATTACHED WITH LAG SCREWS. (TYPICAL)

APPROXIMATELY 10'-6" (3.2 m)

RIGID STEEL CONDUIT RISER (CONTINUOUS 10' (3 m) LENGTH).

HEAVY DUTY GROUND CLAMP, UNIVERSAL U-CLAMP TYPE, BY O.Z. GEDNEY, T&B OR APPROVED EQUAL.

RIGID GALVANIZED THREADED COUPLING.

PVC-COATED RIGID CONDUIT NIPPLE OR CONDUIT EXTENSION, LENGTH AS REQUIRED

APPROX. 6" (150 mm)

GRADE

EXOTHERMIC WELD CONNECTION

PVC COATED RIGID CONDUIT ELBOW 24" (609.6 mm) RADIUS (MIN.) SEE NOTE 3.

30" MIN - 36" MAX (762.0 mm MIN. - 914.0 mm MAX.) TO TOP OF CONDUIT

EXTENSION TO SERVICE EQUIPMENT

THREADED TRANSITION COUPLING, AS APPLICABLE (SEE NOTE 6)

HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY (SEE NOTE 6)

GROUNDING ELECTRODE CONDUCTOR, BARE COPPER, #1/0 AWG. MINIMUM

UTILITY GROUNDING ELECTRODE (AS APPLICABLE), BY UTILITY

GROUND ROD SHALL BE INSTALLED NOT LESS THAN 24" (609 mm) FROM POLE UNLESS APPROVED BY THE ENGINEER

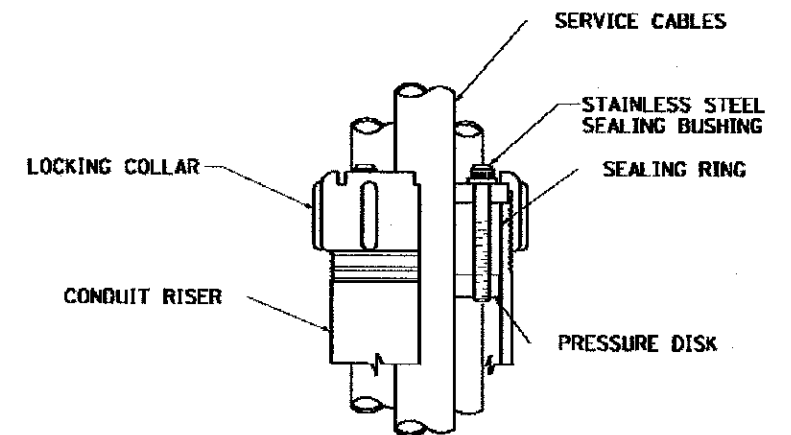
CUSTOMER SERVICE RISER GROUND ELECTRODE 3/8" X 10' (15.875 mm X 3.048 m) COPPERCLAD GROUND ROD (IN UNDISTURBED SOIL) SEE NOTE 5.

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.

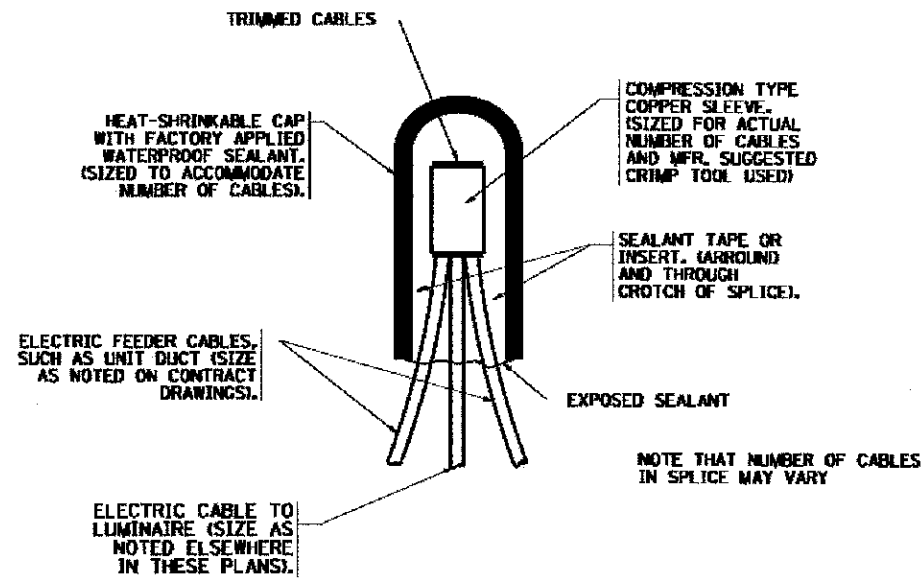


SEALING BUSHING DETAIL

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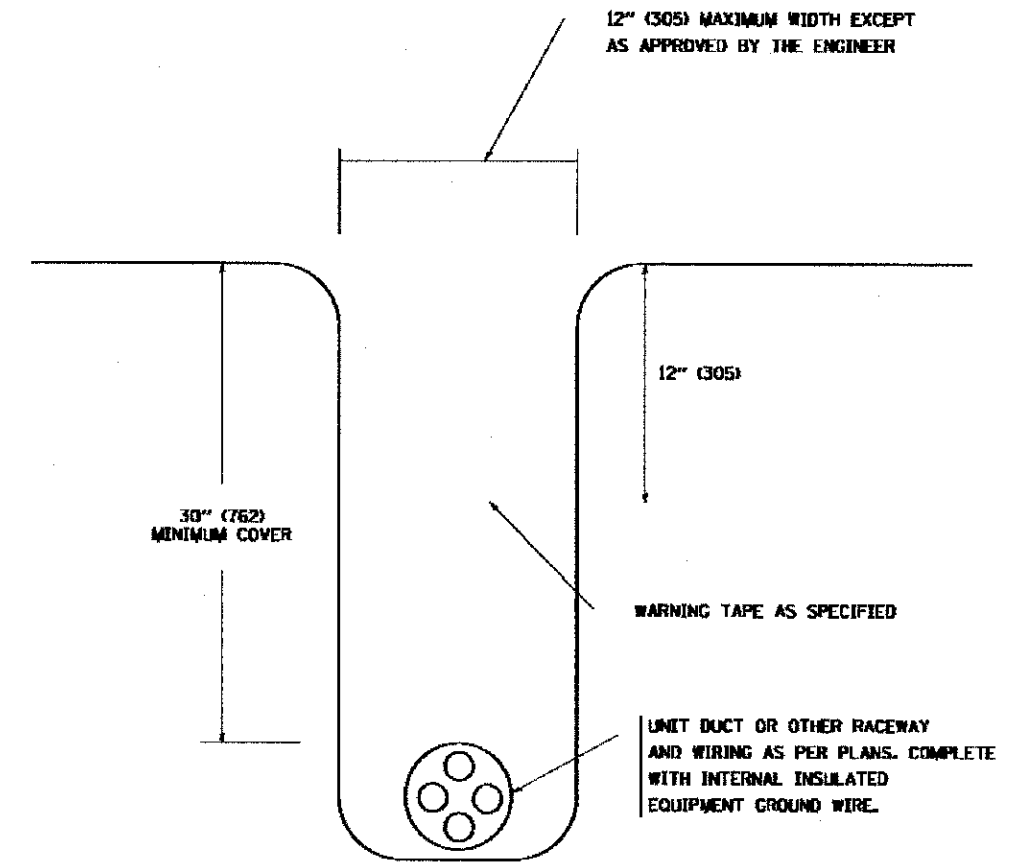
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PLOT DATE = 4/8/2013	CHECKED - MJL	REVISED -
	DATE - 4/8/2013	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	47
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	



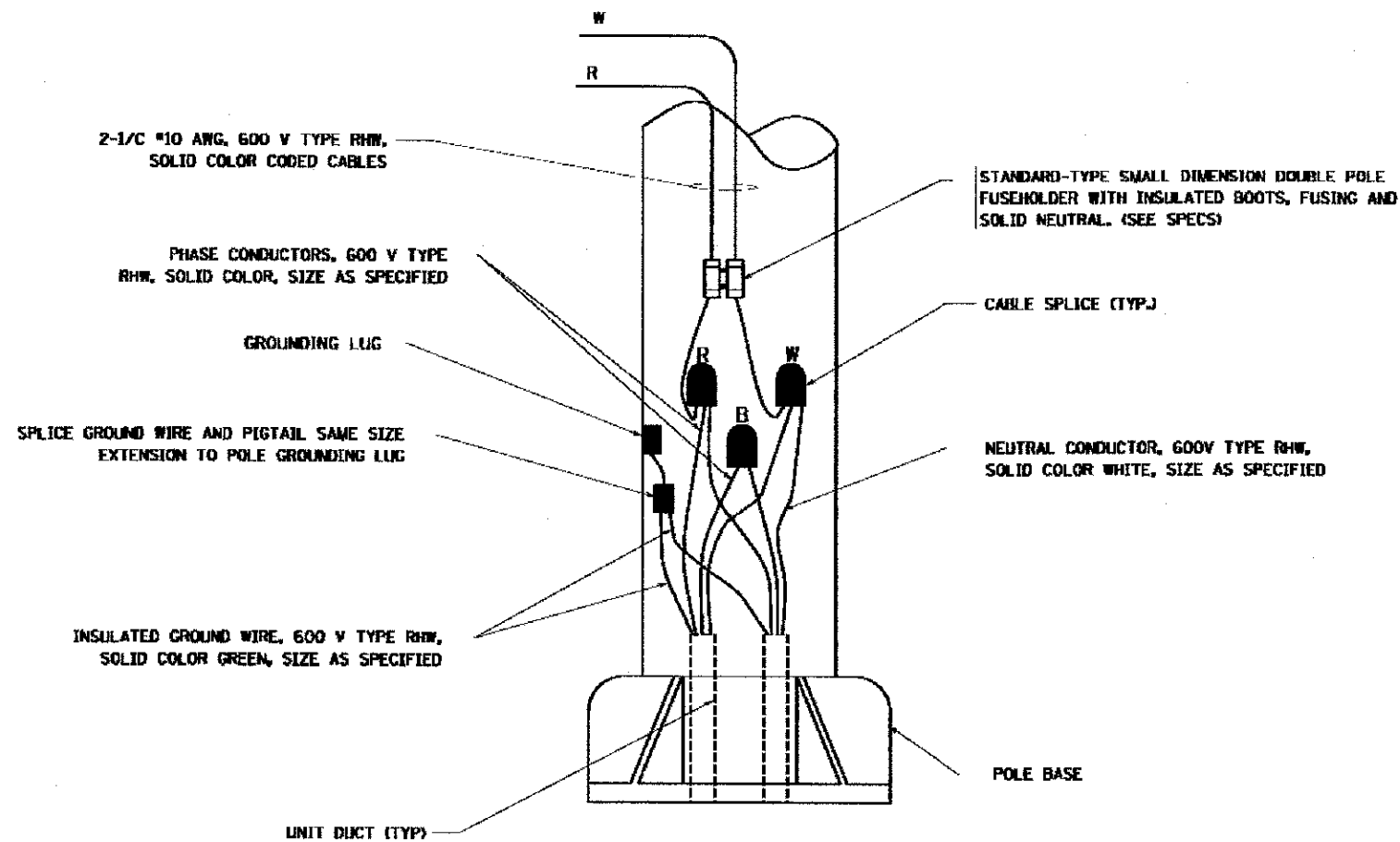
TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.

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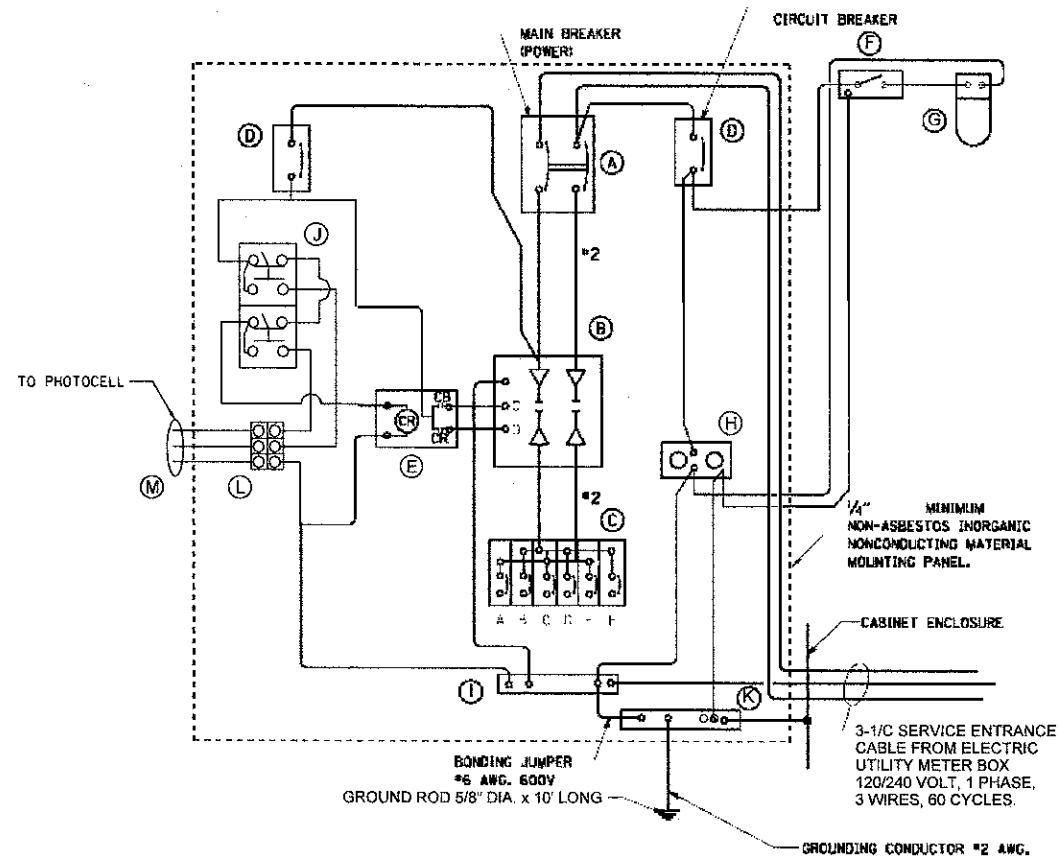
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	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**MISCELLANEOUS ELECTRICAL DETAILS
ROLLINS ROAD UNDERPASS**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	48
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT	
			CONTRACT NO. 63807	



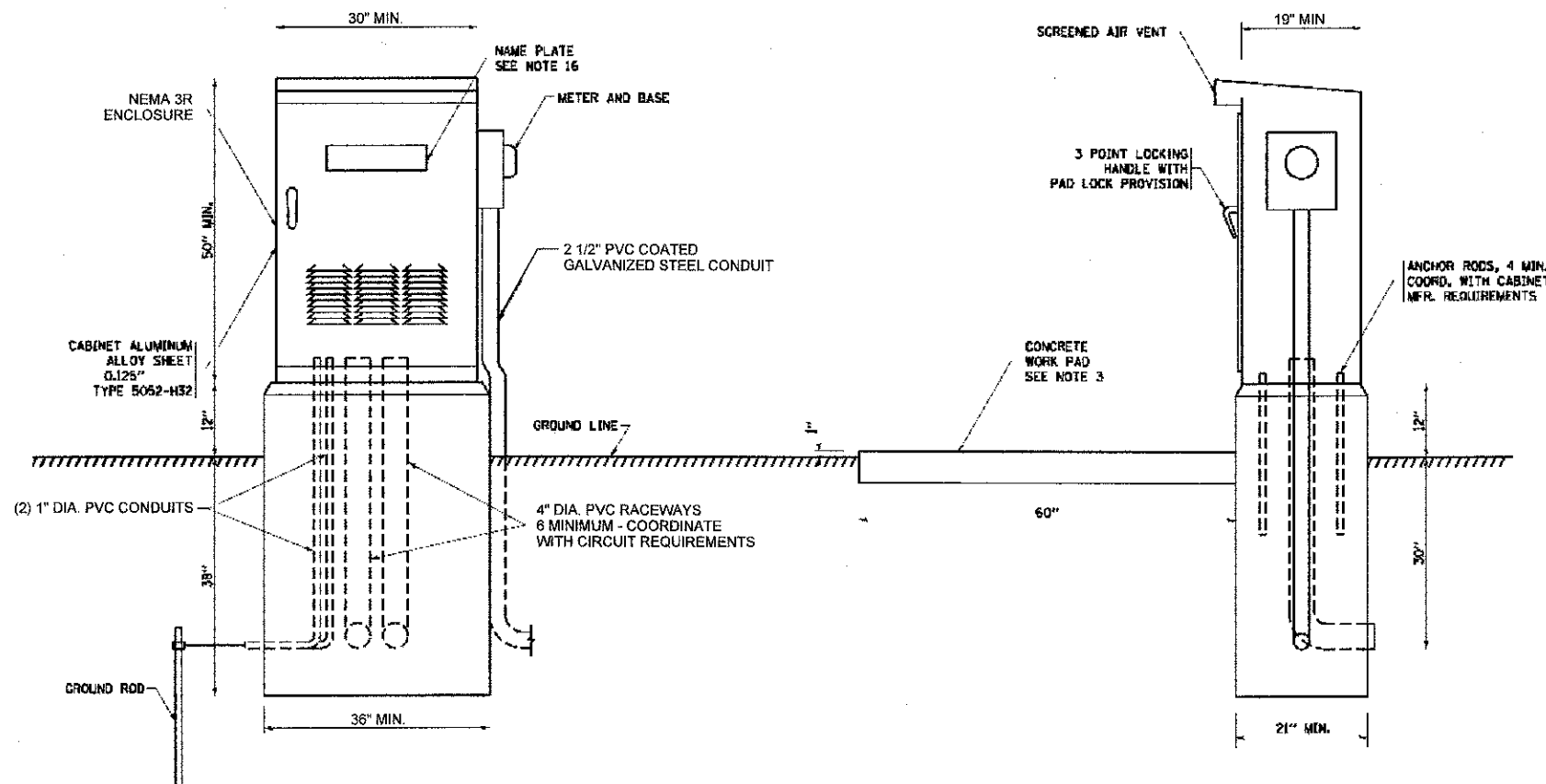
PANEL WIRING DIAGRAM

**PANEL EQUIPMENT
BILL OF MATERIAL**

ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100 AMP. FRAME, 100 AMP, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
C	6	CIRCUIT BREAKERS, 1 POLE, 100 AMP. FRAME, 30 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 VOLTS.
D	2	CONTROL CIRCUIT - CIRCUIT BREAKER. 1 POLE, 240 VOLT, 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5,000 AMP. AT 240 VOLTS.
E	1	RELAY, DPDT, 240 VOLT.
F	1	SPST 20 AMP. SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN.
G	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
H	1	20 AMP., 120 VOLT., DUPLEX RECEPTACLE, GFCI.
I	1	COPPER GROUND BUS 1/4" x 1" x 12" LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS.
J	1	HAND-OFF-AUTOMATIC SWITCH, SQUARE D 9001 KYK-111 OR EQUIVALENT.
K	1	COPPER GROUND BUS 1/4" x 1" x 12" LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS.
L	1	PHOTOCELL TERMINAL BLOCK
M	1	CABINET MOUNT, BUTTON TYPE PHOTOCELL.

NOTES:

- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.
- FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MANUFACTURER.
- IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" TOP SOIL. LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" x 60" x 4" MINIMUM SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
- DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" DIA. STAINLESS STEEL HINGE PIN.
- ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
- CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
- METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAREST TO THE SERVICE POLE.
- CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
R = RED BL = BLUE W = WHITE
B = BLACK Y = YELLOW G = GREEN
- PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
- 12" x 16" STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED WITH "LAKE COUNTY FOREST PRESERVES DISTRICT LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.



**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**LIGHTING CONTROLLER, SPECIAL
ROLLINS ROAD UNDERPASS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	49
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 63807	

USER NAME	DESIGNED	REVISIONS
jk.jallman	JMV	
	JMV	
	MJL	

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5507 North Cumberland Avenue, Suite 402
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Tel. 773.775.4009 Fax 773.775.4014

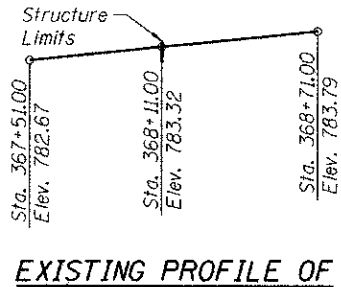
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Benchmark: Large Mag nail in north face of the first utility pole on the south side of Rollins Road. First pole west of the proposed tunnel crossing. Sta. 367+34, Offset 44.00' Rt. Elev. 782.70 (NAVD 88)

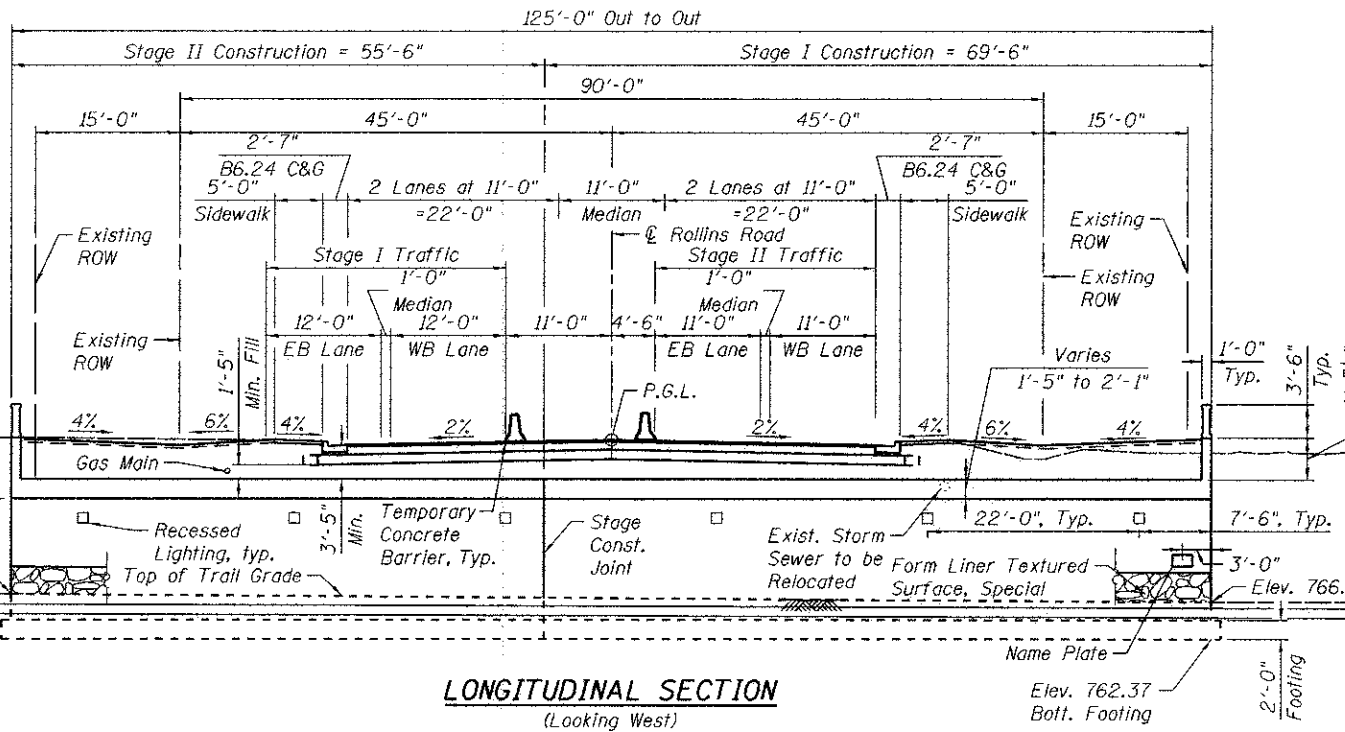
Maintenance of Traffic: Traffic will be staged during construction.

Existing Structure: None.

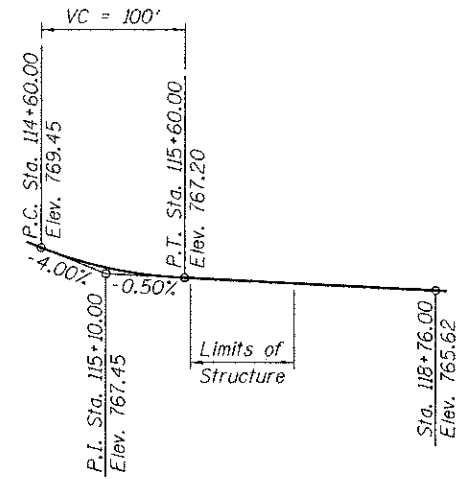
Note: Precast alternate is not allowed.



Proposed 12" ϕ Storm Sewer
Inv. Elev. 765.10



LONGITUDINAL SECTION
(Looking West)



PROPOSED PROFILE GRADE
TRAIL UNDERPASS
(Along Centerline of Millennium Trail)

CURVE DATA

MILLENNIUM TRAIL

$\Delta = 28^\circ 28' 02''$ (LT)	$\Delta = 69^\circ 19' 00''$ (LT)
$D = 27^\circ 17' 01''$	$D = 38^\circ 11' 50''$
$T = 53.27'$	$T = 103.70'$
$L = 104.34'$	$L = 181.47'$
$E = 6.65'$	$E = 32.36'$
$R = 210.00'$	$R = 150.00'$
P.C. = Sta. 114+57.92	P.C. = Sta. 116+95.00
P.T. = Sta. 115+62.26	P.T. = Sta. 118+76.47
P.I. = Sta. 115+11.19	P.I. = Sta. 117+98.70

ROLLINS ROAD
BUILT 201 BY
LAKE COUNTY FOREST
PRESERVE DISTRICT
SEC 12-F3000-01-BT
F.A.U. 181 STA. 368+11.00
STR. NO. 049-NO08 LOADING HL93

NAME PLATE

See Std. 515001

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.087g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.161g
Soil Site Class = D

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications,
6th Edition with 2012 Interims

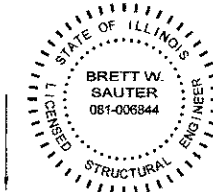
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

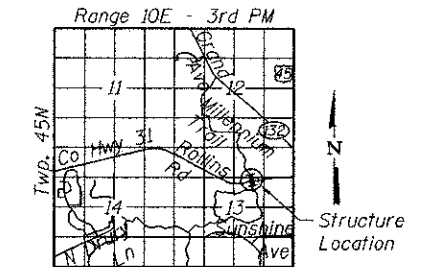
LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.



DATE: 4/5/2013
SEAL EXPIRES: 11/30/2014

I certify that to the best of knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.



LOCATION SKETCH

GENERAL PLAN & LONGITUDINAL SECTION

ROLLINS ROAD OVER MILLENNIUM TRAIL

F.A.U. RTE. 181

SEC. 12-F3000-01-BT

LAKE COUNTY

STATION 368+11.00

STRUCTURE NUMBER 049-NO08

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CHECKED - BWS	REVISIONS -	
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PLOT DATE = 4/8/2013	CHECKED - BWS	REVISIONS -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

F.A.U. RTE. 181	SECTION 12-F3000-01-BT	COUNTY LAKE	TOTAL SHEETS 118	SHEET NO. 50
CONTRACT NO. 63807				

SHEET NO. S-1 OF S-12 SHEETS

ILLINOIS FED. AID PROJECT

GENERAL NOTES

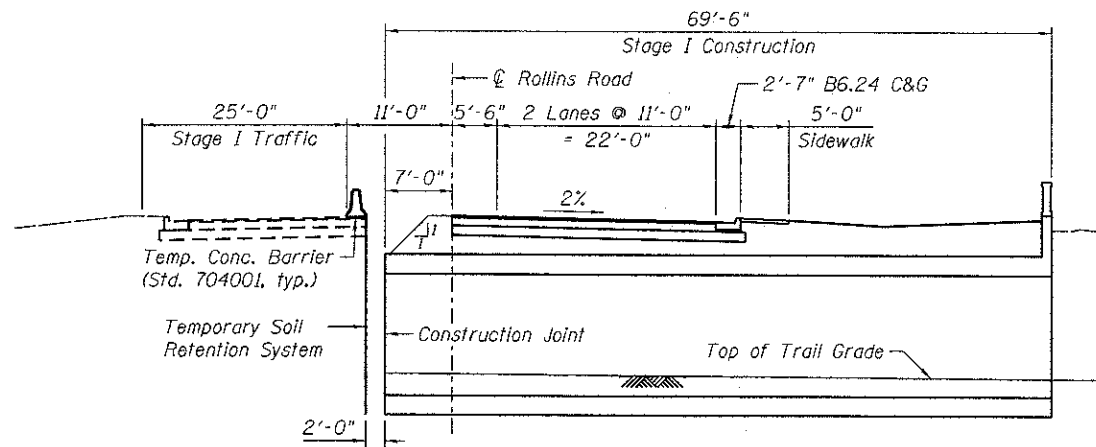
- Reinforcement bars designated (E) shall be epoxy coated.
- A cantilevered sheet piling does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
- The Contractor is alerted to the fact that the soil borings indicate the presence of sand and silt layers below the static groundwater elevation of 769 feet. Aggressive dewatering utilizing well-points, deep sumps, cut-off walls or other means may be necessary for deeper excavations. The dewatering should be accomplished prior to soil excavation. Soils exposed during excavation may lose bearing strength and stability if permitted to become saturated. Mud slabs, gravel blankets or other means may be required to stabilize the bottom of excavations. The Contractor is responsible for designing and constructing stable temporary excavations by shoring, sloping, benching, or restraining the sides of excavations as required to maintain stability of both the excavation sides and bottom. If loss of bearing strength or stability occurs due to the Contractor not properly designing or constructing the excavation, the Contractor will be required to remove the unsuitable and/or unstable material and backfill as directed by the Engineer at no additional cost to the Contract. See Geotechnical Investigation Report for additional information.

TOTAL BILL OF MATERIAL

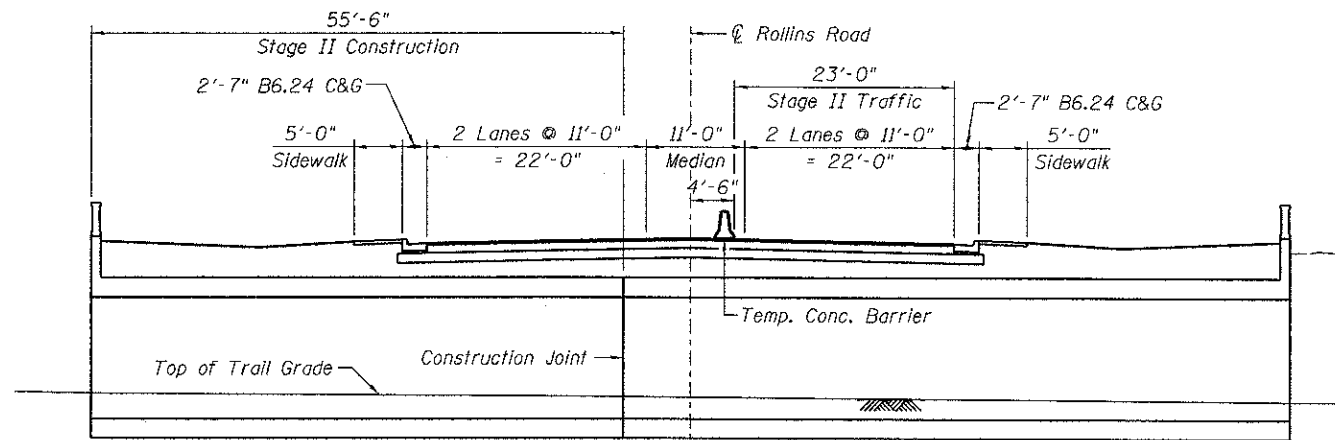
Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	6,567
Geotechnical Fabric for Ground Stabilization	Sq. Yd.	267
Stone Riprap, Class A2	Ton	523
Aggregate Base Course, Type B	Cu. Yd.	89
Concrete Structures	Cu. Yd.	742.6
Rubbed Finish	Sq. Ft.	5,227
Reinforcement Bars, Epoxy Coated	Pound	94,700
Bar Splicers	Each	123
Name Plates	Each	1
Membrane Waterproofing	Sq. Ft.	2,875
Geocomposite Wall Drain	Sq. Yd.	524
Structure Excavation, Special	Cu. Yd.	8,826
Ornamental Railing	Foot	145
Staining Concrete Structures	Sq. Yd.	247
Form Liner Textured Surface, Special	Sq. Ft.	2,215
Pipe Underdrains for Structures, 4"	Foot	695
Temporary Soil Retention System	Sq. Ft.	2,526

INDEX OF SHEETS

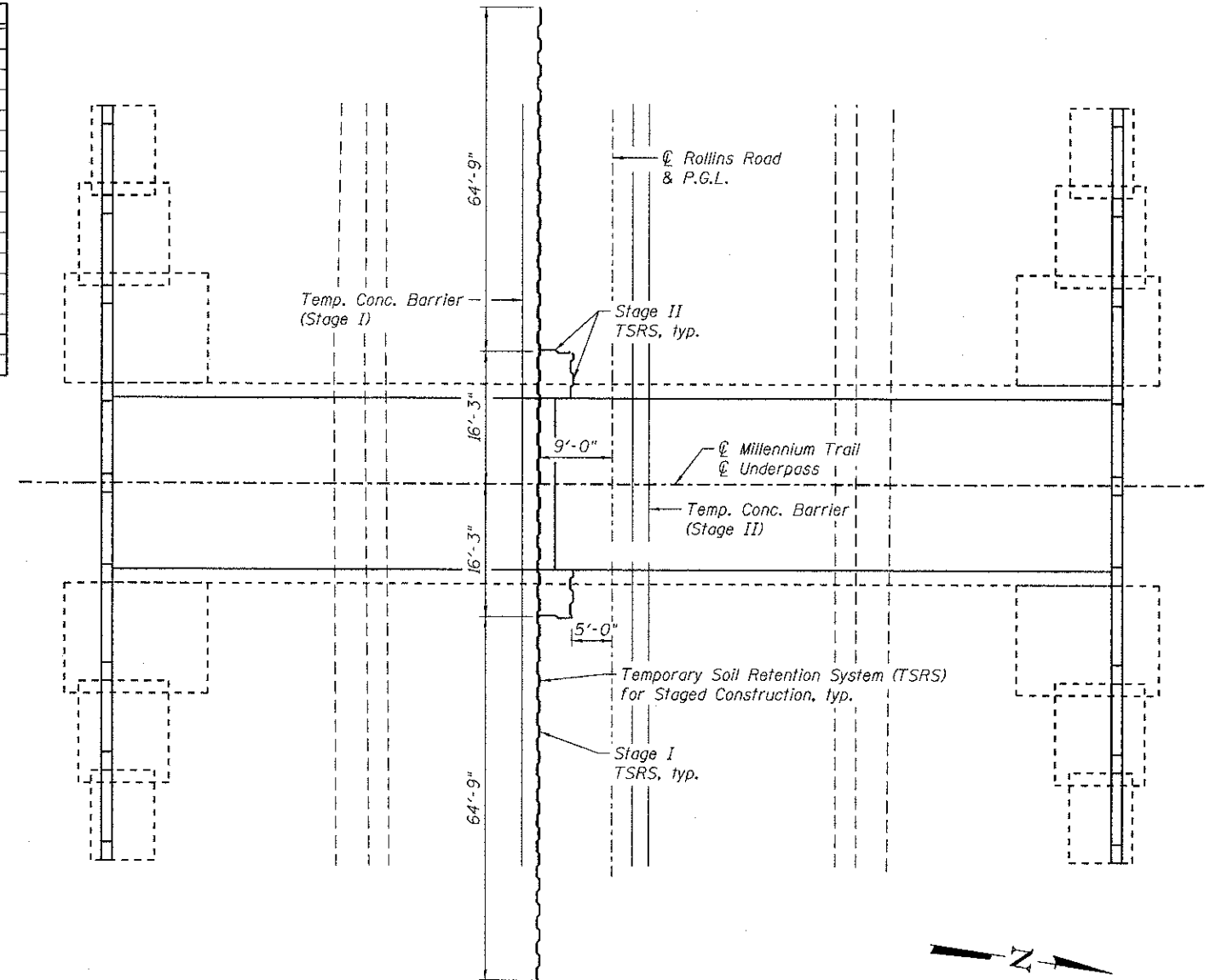
- S-1 General Plan & Longitudinal Section
- S-2 General Notes, Total Bill of Materials & Staging Details
- S-3 Underpass Plan and Elevation
- S-4 Underpass Details
- S-5 South Wingwalls Details
- S-6 North Wingwalls Details
- S-7 Wingwall Details
- S-8 Architectural Details
- S-9 Bar Splicer Assembly and Mechanical Splicer Details
- S-10 Soil Borings 1
- S-11 Soil Borings 2
- S-12 Soil Borings 3



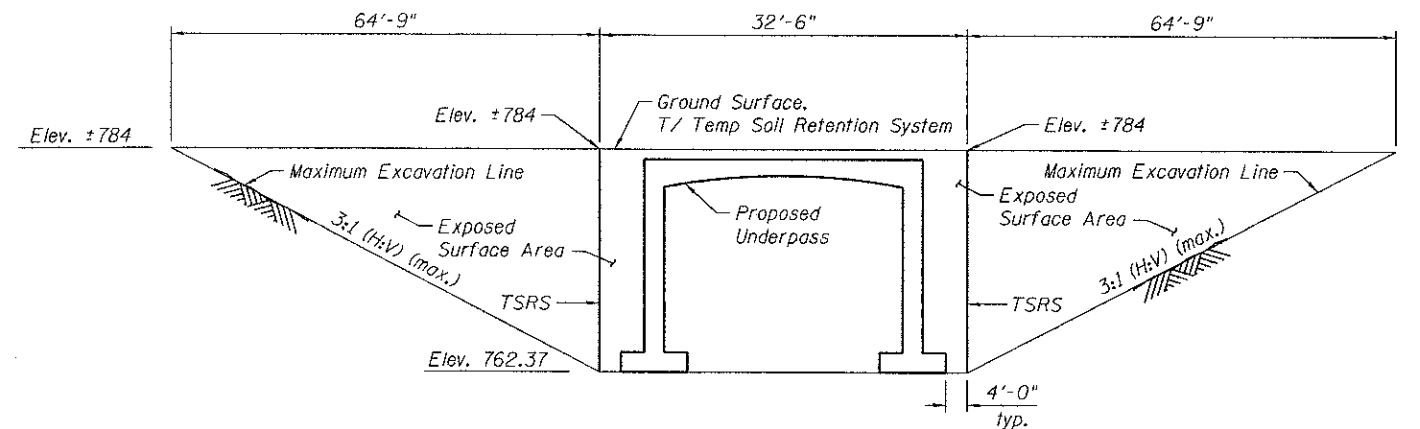
STAGE I CONSTRUCTION
(Looking West)



STAGE II CONSTRUCTION
(Looking West)



TEMPORARY SOIL RETENTION SYSTEM - PLAN



TEMPORARY SOIL RETENTION SYSTEM - ELEVATION

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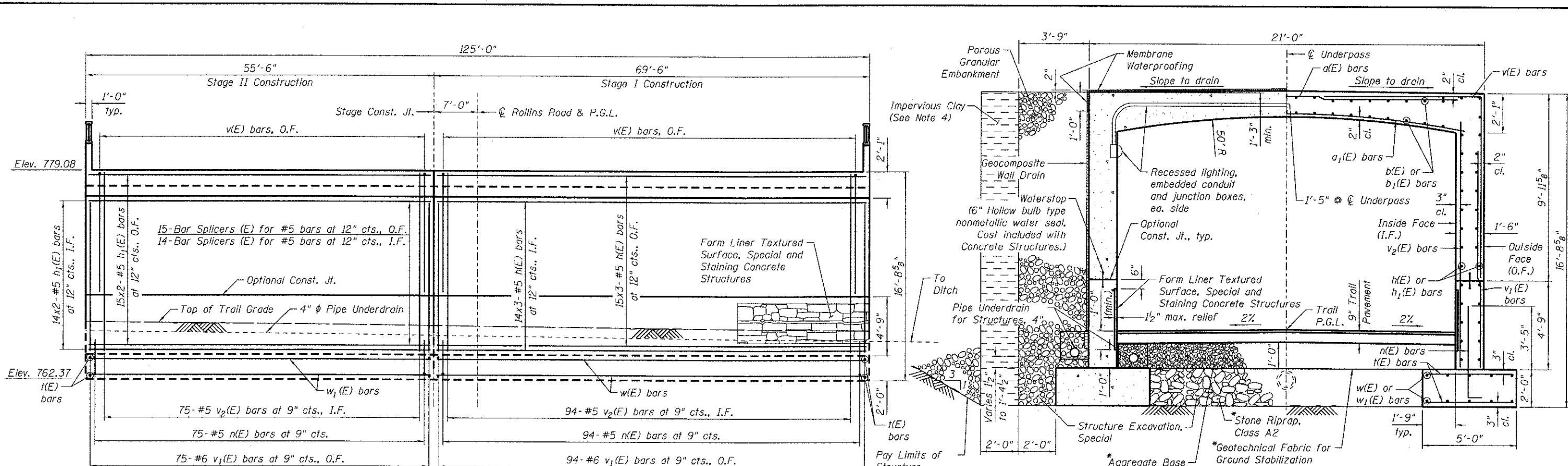


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PLOT DATE = 4/8/2013	DRAWN - SRG	REVISED -
	CHECKED - APD	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

GENERAL NOTES, TOTAL BILL OF MATERIALS & STAGING DETAILS
STRUCTURE NO. 049-N008
 SHEET NO. S-2 OF S-12 SHEETS

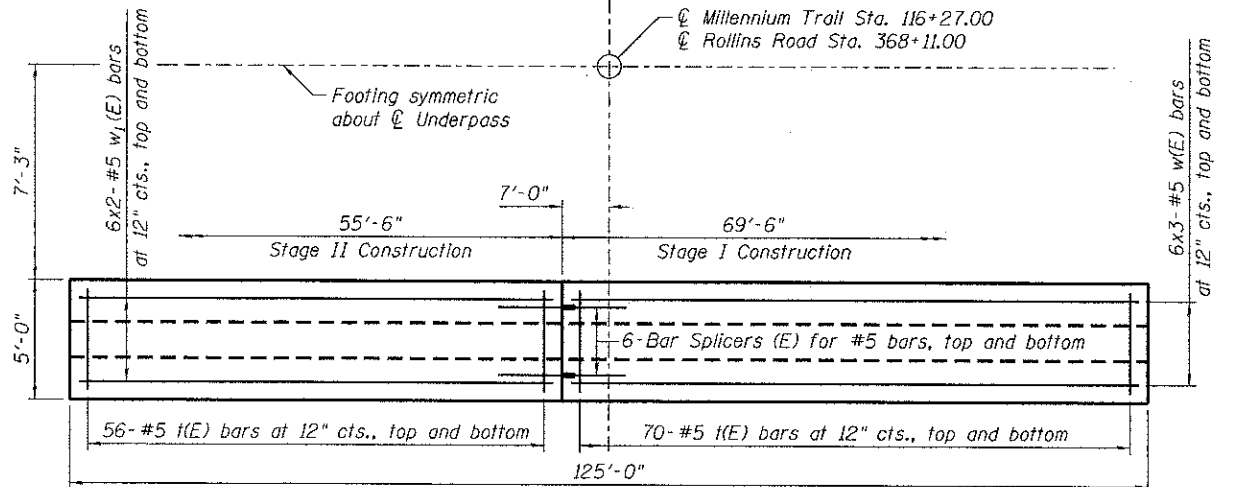
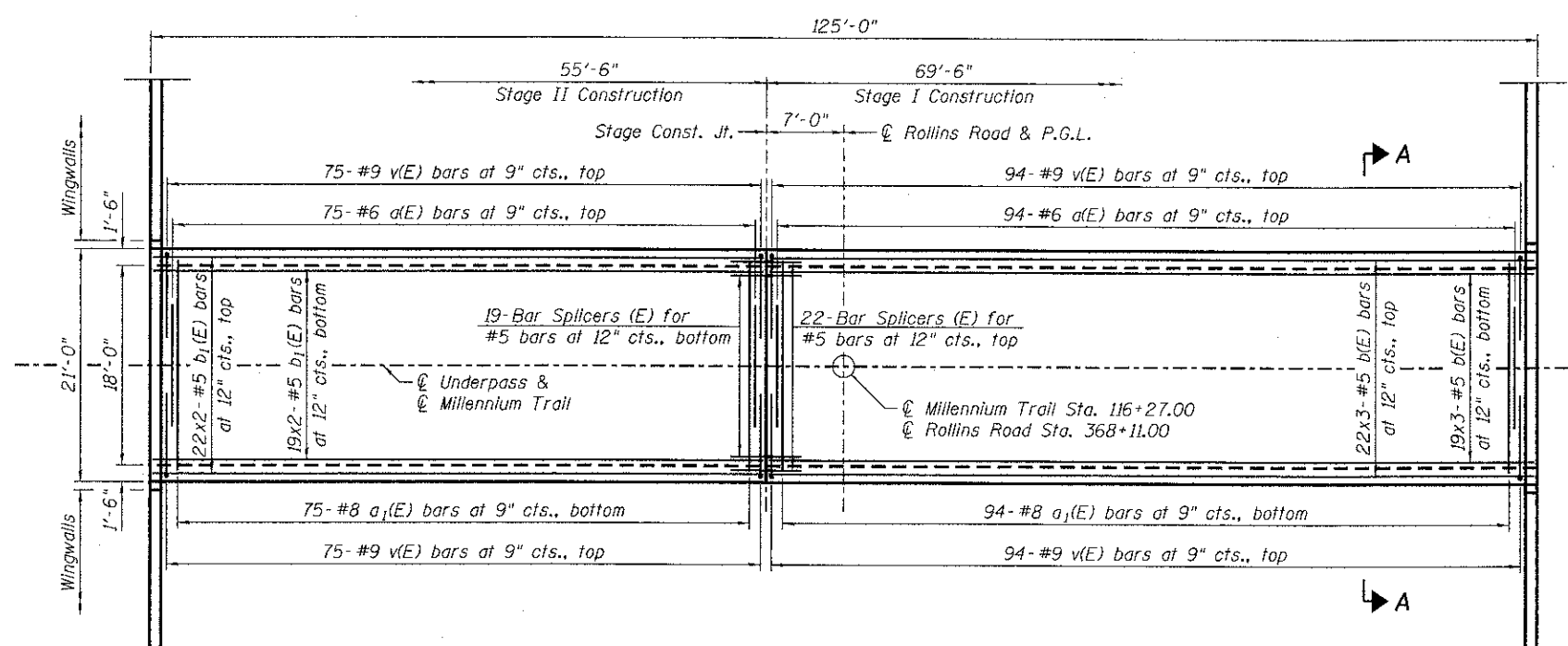
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	51
				CONTRACT NO. 63807
ILLINOIS FED. AID PROJECT				



SECTION A-A
(Structure symmetric about ϕ Underpass)

Note: * To be placed between Sta. 115+50 and Sta. 117+00.

Note:
 Maximum factored net bearing pressure = 2,700 psf
 Maximum factored bearing resistance available = 4,500 psf
 Maximum net allowable bearing resistance = 3,000 psf



- Notes:
- See sheet S-4 for Bill of Materials and Bar Dimensions.
 - See sheets S-5 & S-6 for pipe underdrain invert elevations and sheet S-7 for Pipe Underdrain Detail.
 - See sheet S-8 for Architectural Details.
 - Impervious clay layer to be placed full height of tunnel at location shown above. Cost included with Structure Excavation, Special.

MIN. BAR LAP

Bar Size	Class C
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

N:\PROJ\0220857\01\1_Rollins\Design\Structure\CAD\0220857_01_R03_Plan_End_Elevation_Details.dgn
 11/15/2013 10:52:11 AM
 User: rrdaley



USER NAME = rrdaley	DESIGNED - SMY	REVISED -
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PLOT DATE = 4/8/2013	DRAWN - SRG	REVISED -
	CHECKED - BWS	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**UNDERPASS PLAN AND ELEVATION
STRUCTURE NO. 049-N008**

SHEET NO. S-3 OF S-12 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	52
CONTRACT NO. 63807				
ILLINOIS FED. AID PROJECT				

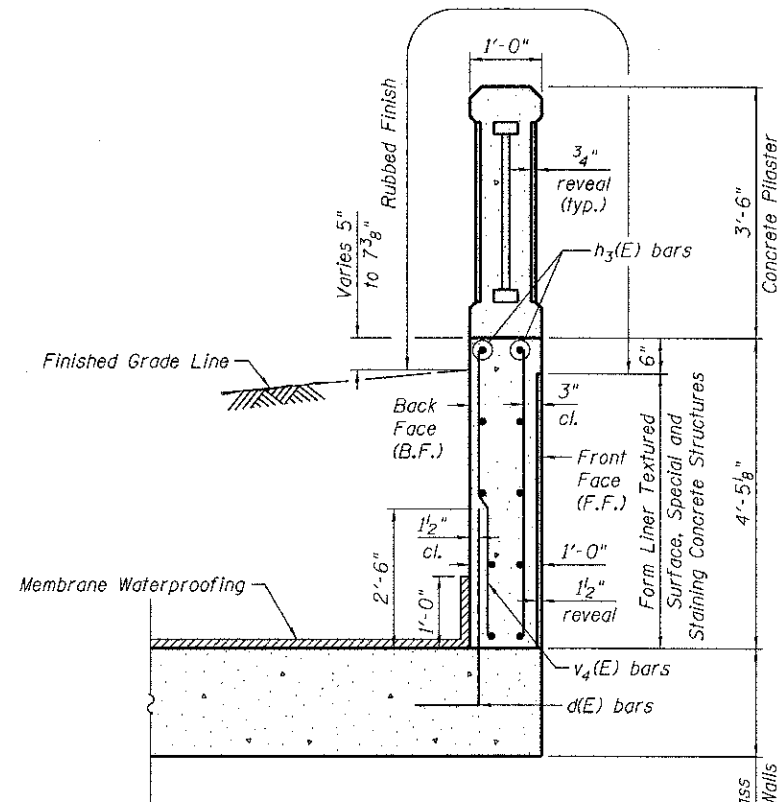
BILL OF MATERIAL

(For Underpass)

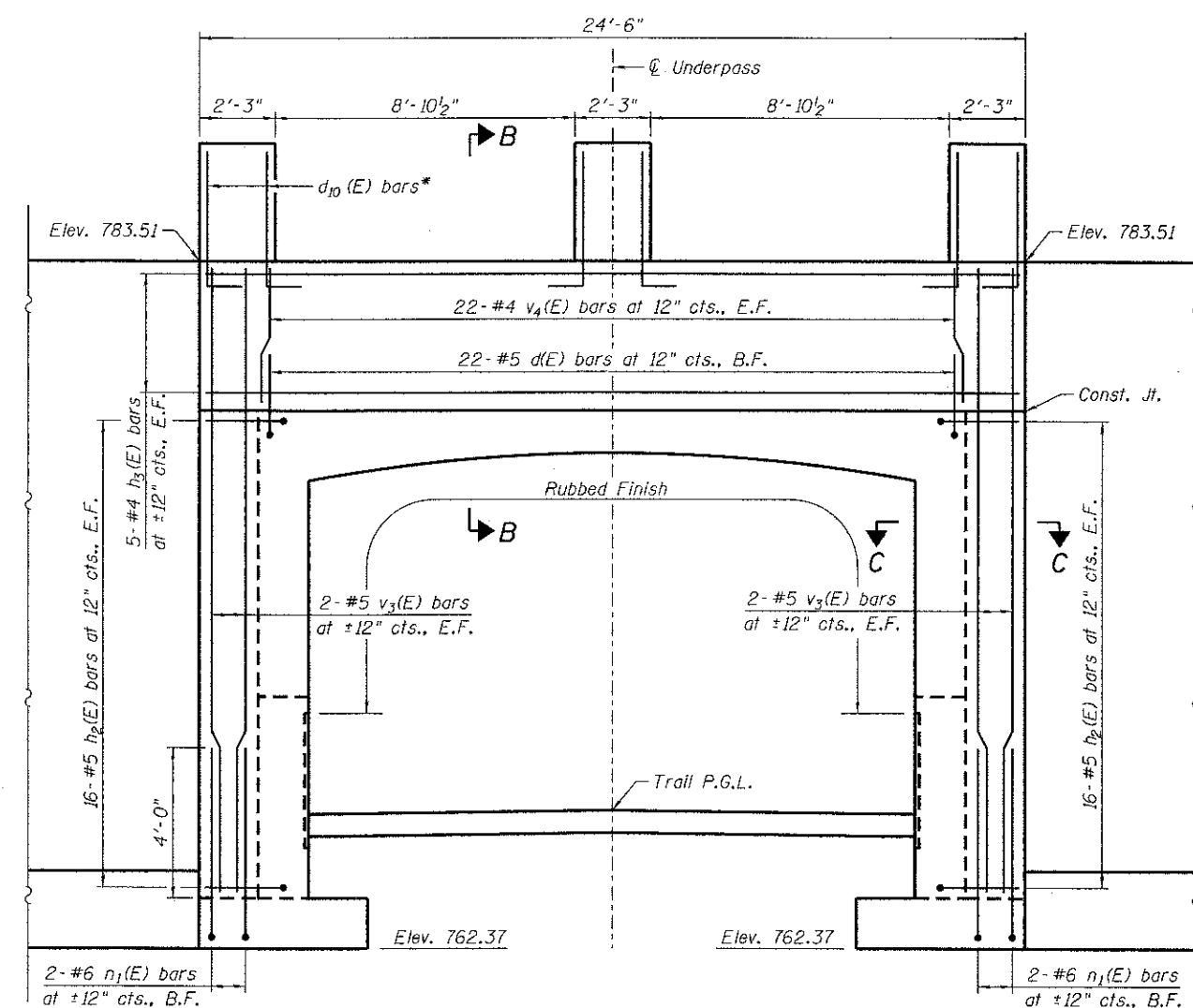
Bar	No.	Size	Length	Shape
a(E)	169	# 6	18'-0"	—
a ₁ (E)	169	# 8	19'-2"	—
b(E)	123	# 5	25'-3"	—
b ₁ (E)	82	# 5	29'-3"	—
d(E)	44	# 5	5'-3"	—
h(E)	174	# 5	25'-3"	—
h ₁ (E)	116	# 5	29'-3"	—
h ₂ (E)	128	# 5	3'-7"	—
h ₃ (E)	20	# 4	24'-2"	—
n(E)	338	# 5	5'-11"	—
n ₁ (E)	8	# 6	6'-8"	—
t(E)	504	# 5	4'-6"	—
v(E)	338	# 9	18'-11"	—
v ₁ (E)	338	# 6	11'-0"	—
v ₂ (E)	338	# 5	14'-3"	—
v ₃ (E)	16	# 5	18'-10"	—
v ₄ (E)	88	# 4	4'-1"	—
w(E)	72	# 5	25'-2"	—
w ₁ (E)	48	# 5	29'-2"	—

Item	Unit	Quantity
Porous Granular Embankment	Cu. Yd.	6,343
Aggregate Base Course, Type B	Cu. Yd.	89
Geotechnical Fabric for Ground Stabilization	Sq. Yd.	267
Stone Riprap, Class A2	Ton	523
Structure Excavation, Special	Cu. Yd.	7,631
Concrete Structures	Cu. Yd.	463.9
Form Liner Textured Surface, Special	Sq. Ft.	998
Reinforcement Bars, Epoxy Coated	Pound	68,910
Membrane Waterproofing	Sq. Ft.	2,875
Geocomposite Wall Drain	Sq. Yd.	393
Pipe Underdrain for Structures, 4"	Foot	539
Rubbed Finish	Sq. Ft.	4,648
Staining Concrete Structures	Sq. Yd.	111

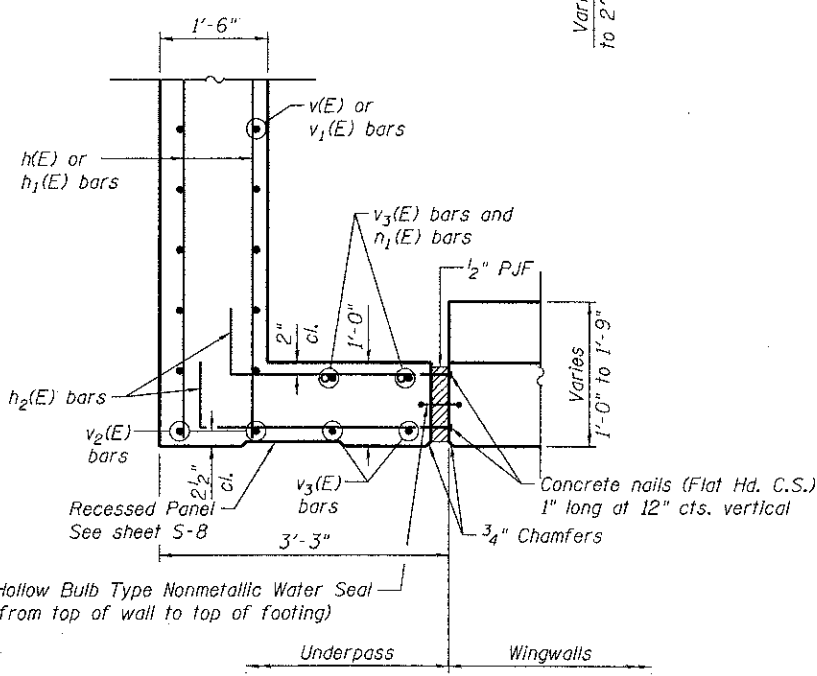
- NOTES:**
- 1) Bars indicated thus 13x3-#6 etc. indicates 13 lines of bars with 3 lengths per line.
 - 2) Porous Granular Embankment to be placed to bottom elevation of roadway subbase.



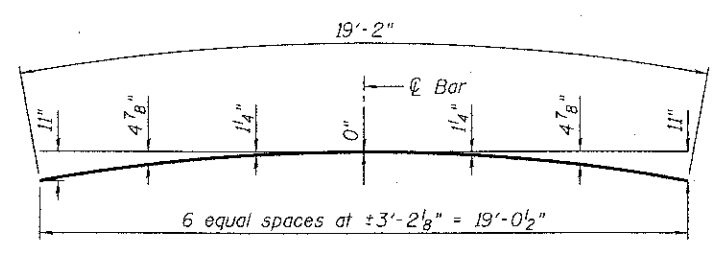
SECTION B-B
 (Plaster and Underpass Reinforcement not shown)
 * See sheet S-8 for details



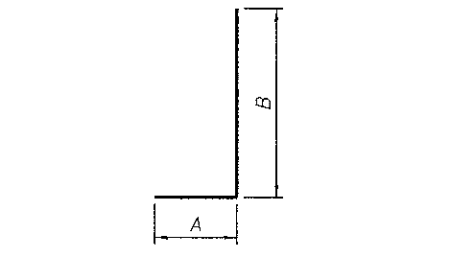
ENTRANCE ELEVATION
 (South Entrance shown - North Entrance similar)



SECTION C-C



BAR a₁(E)



Bar	A	B
d(E)	10"	4'-5"
h ₂ (E)	10"	2'-9"
n(E)	10"	5'-1"
n ₁ (E)	1'-0"	5'-8"

BAR v(E)

N:\PROJECTS\020887_01_V_Rollins\Design\Structure\020887_01_004_Underpass.Details.dgn



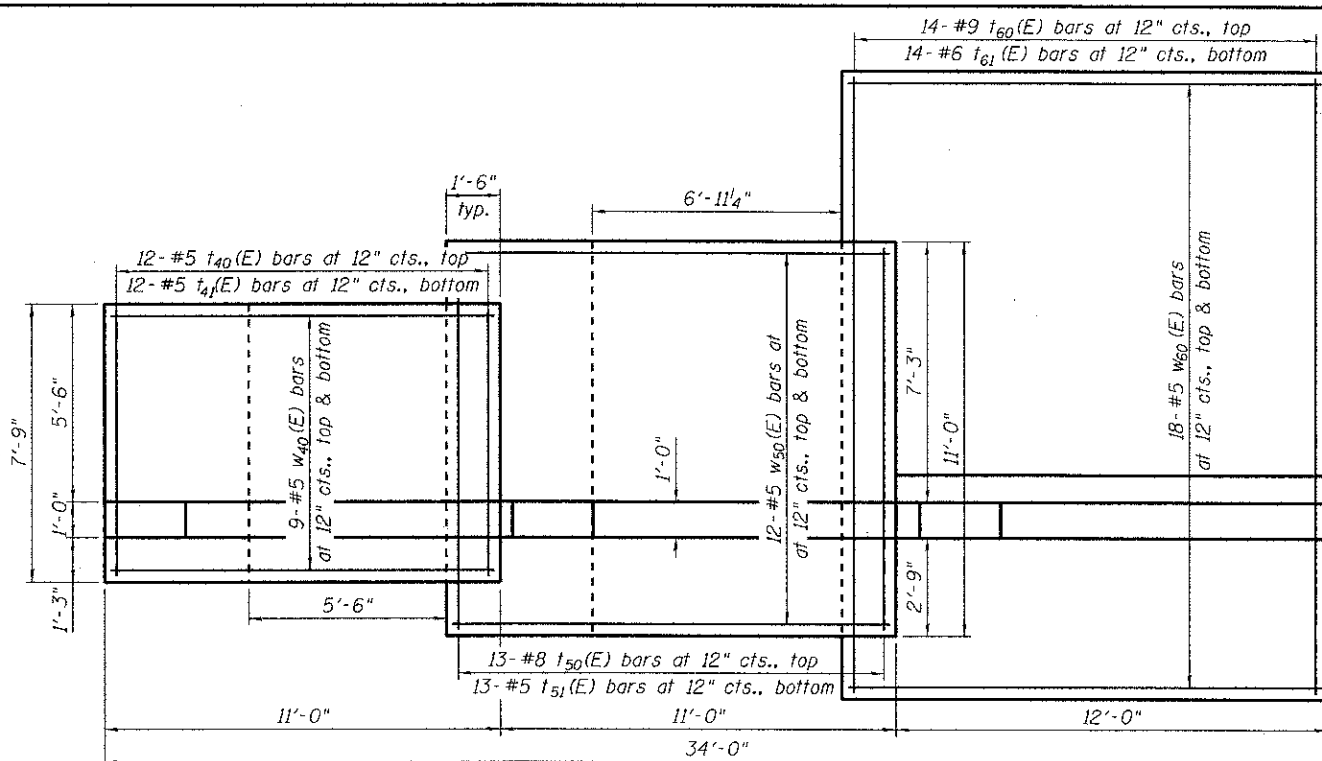
USER NAME	DESIGNED	REVISIONS
rdanley	SMY	-
	MHT	-
	SRG	-
	BWS	-

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

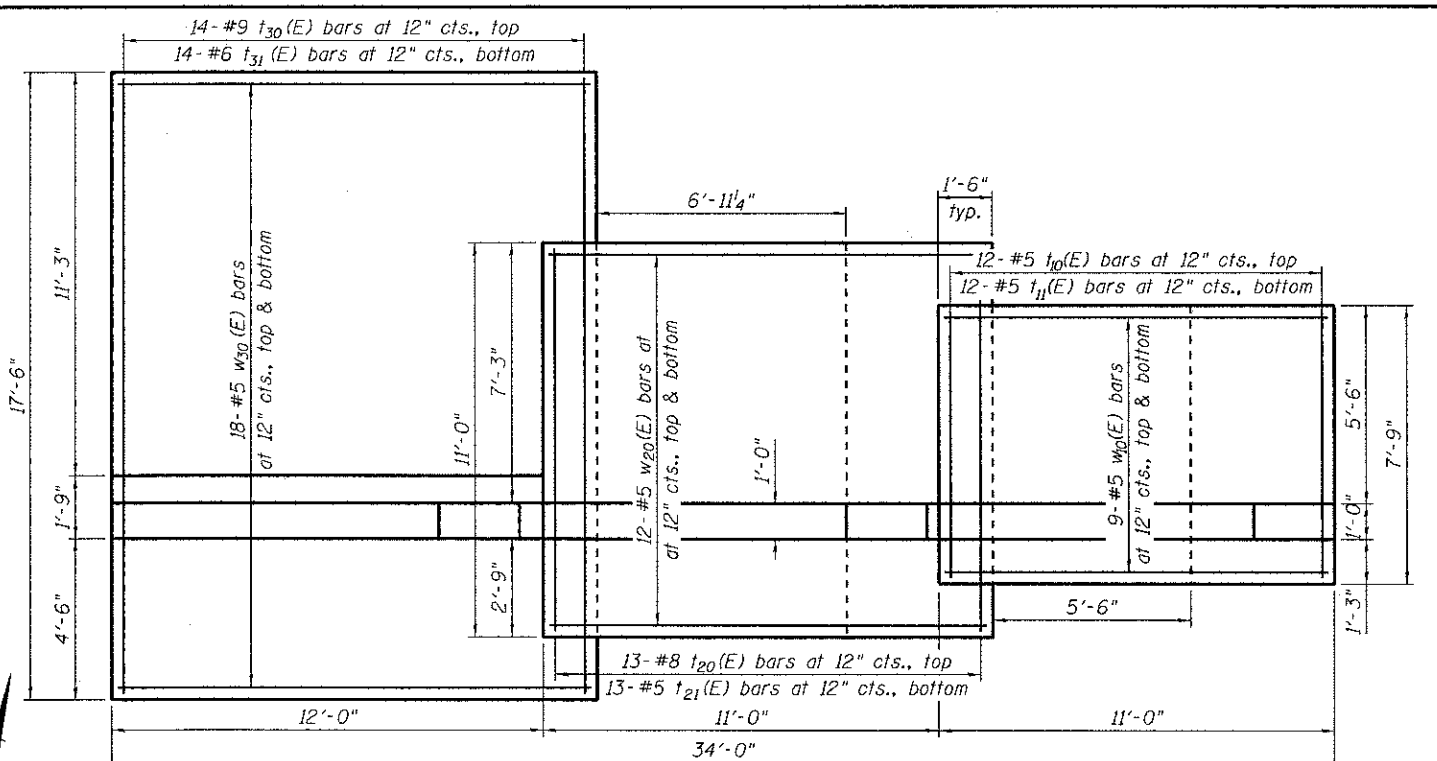
**UNDERPASS DETAILS
 STRUCTURE NO. 049-N008**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	53
			CONTRACT NO. 63807	

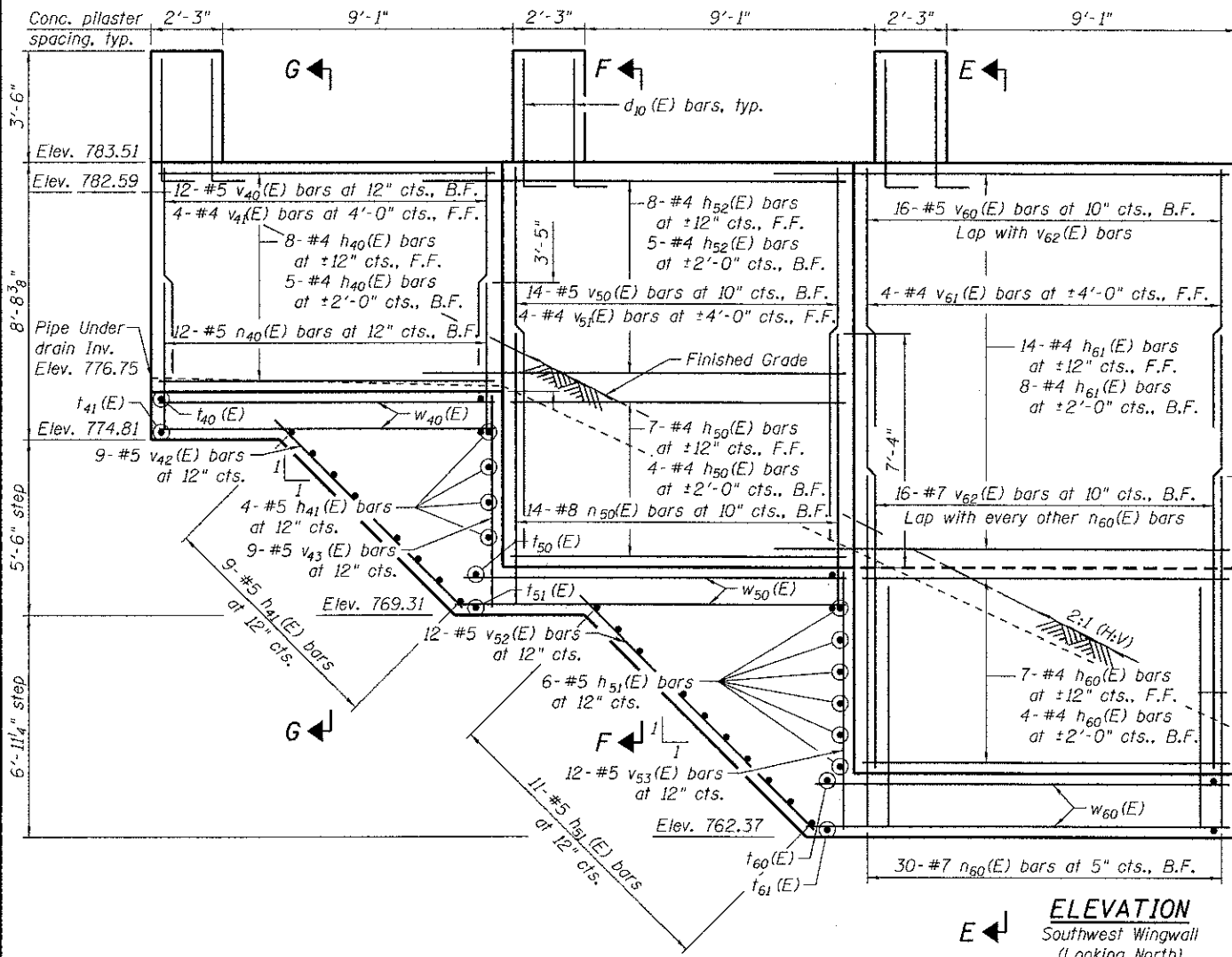
ILLINOIS FED. AID PROJECT



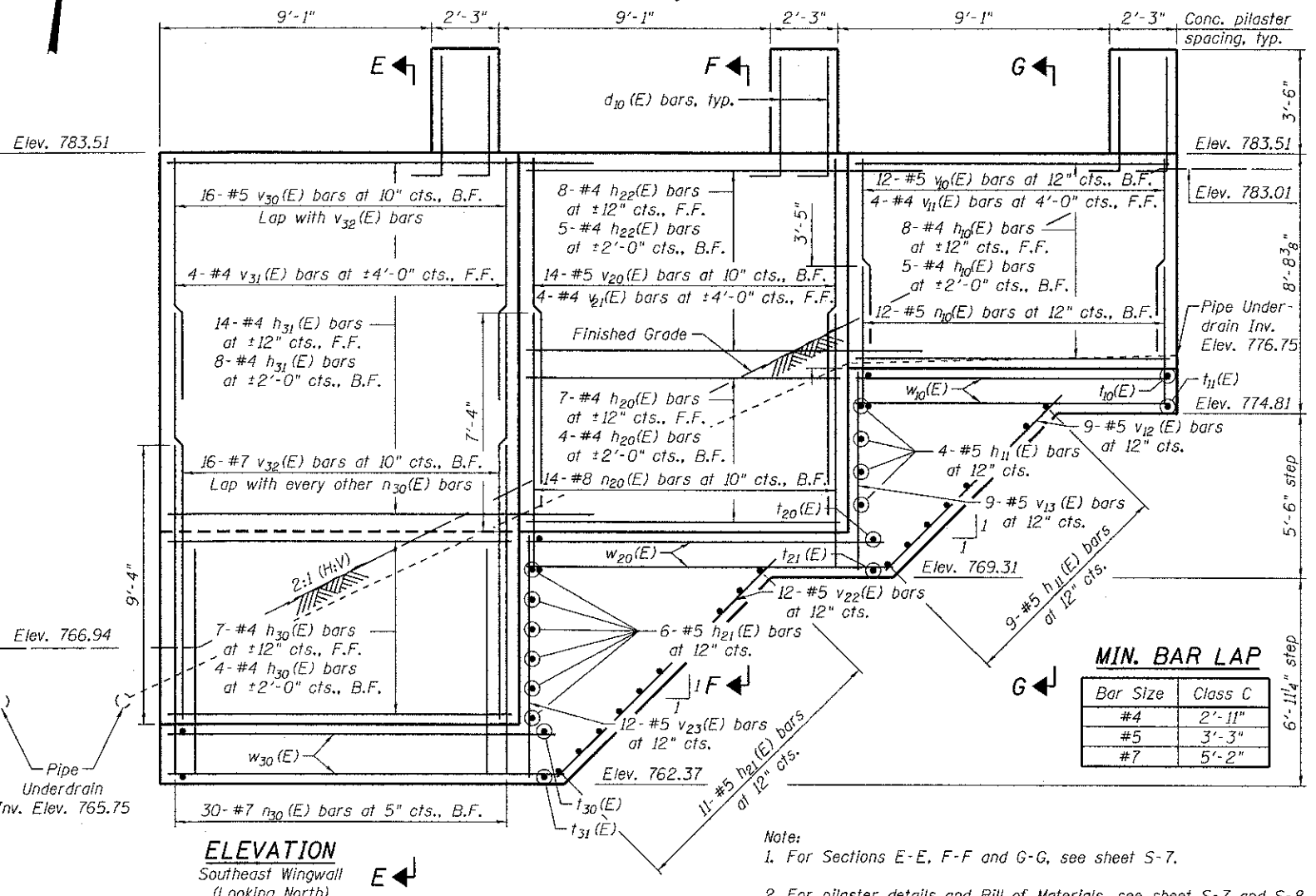
PLAN
Southwest Wingwall



PLAN
Southeast Wingwall



ELEVATION
Southwest Wingwall
(Looking North)



ELEVATION
Southeast Wingwall
(Looking North)

MIN. BAR LAP

Bar Size	Class C
#4	2'-11"
#5	3'-3"
#7	5'-2"

Note:
1. For Sections E-E, F-F and G-G, see sheet S-7.
2. For pilaster details and Bill of Materials, see sheet S-7 and S-8.

N:\PROJECTS\20220827\01\1\Revisions\Design\Structural\CAD\0220827_01_005_South Wingwalls_Details.dwg
 CONSULTING ENGINEERS
 5501 North Lincoln Avenue
 Suite 400 Chicago, Illinois 60630
 Tel: 773.776.4000
 Fax: 773.776.4001
 Email: cpe@clorba.com



USER NAME = rdenley	DESIGNED - MHT	REVISED -
PLOT SCALE = 2.866667' / in.	CHECKED - APD	REVISED -
PLOT DATE = 4/8/2013	DRAWN - SRG	REVISED -
	CHECKED - BWS	REVISED -

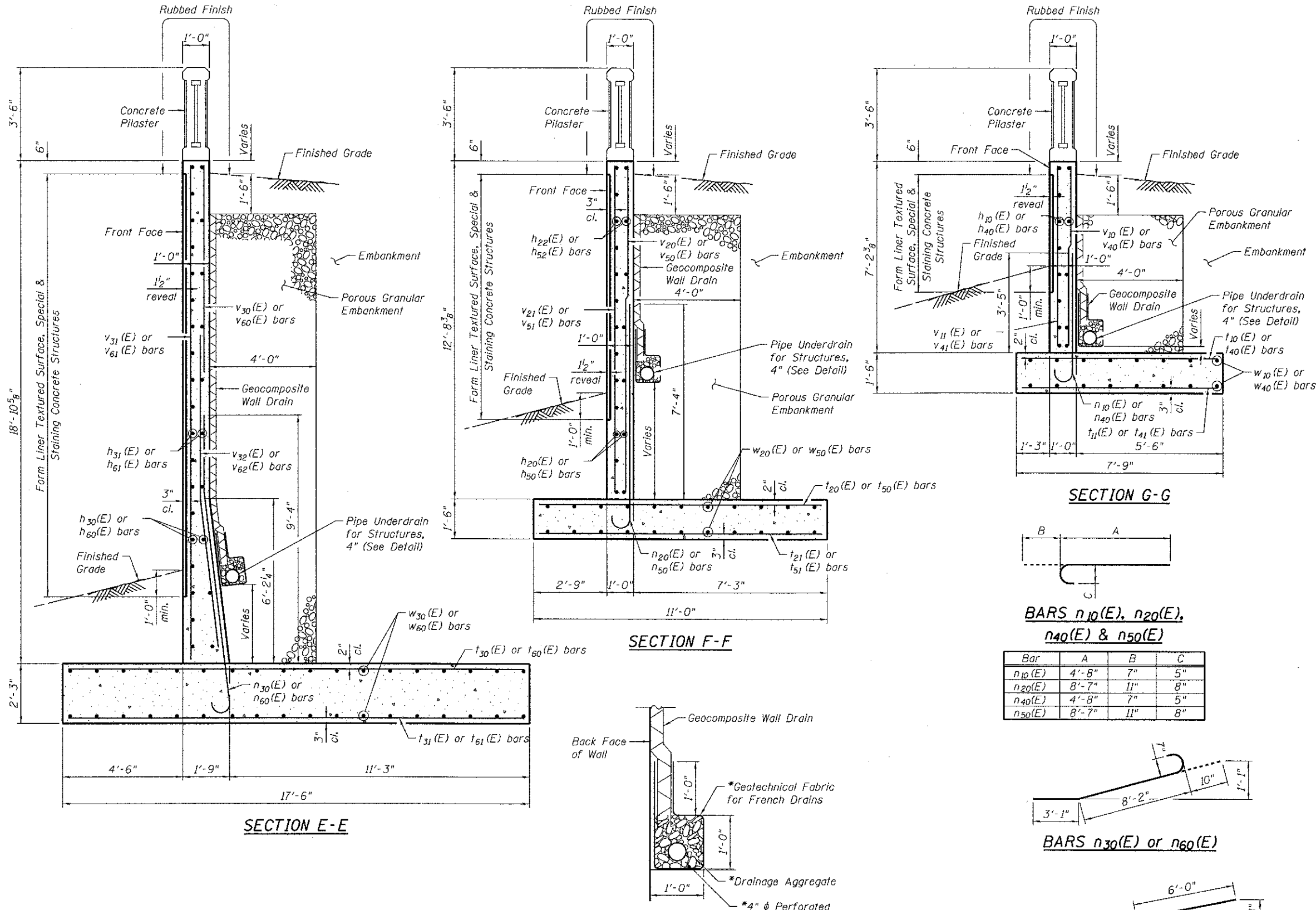
**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**SOUTH WINGWALLS DETAILS
STRUCTURE NO. 049-N008**
SHEET NO. S-5 OF S-12 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	54

CONTRACT NO. 63807
ILLINOIS FED. AID PROJECT

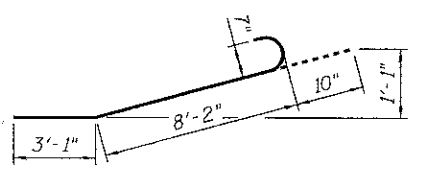
BILL OF MATERIAL



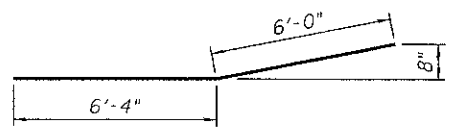
Bar	No.	Size	Length	Shape
h ₁₀ (E)	26	# 4	10'-8"	—
h ₁₁ (E)	26	# 5	7'-5"	—
h ₂₀ (E)	22	# 4	10'-8"	—
h ₂₁ (E)	34	# 5	10'-8"	—
h ₂₂ (E)	26	# 4	13'-11"	—
h ₃₀ (E)	22	# 4	11'-8"	—
h ₃₁ (E)	44	# 4	14'-11"	—
h ₄₀ (E)	26	# 4	10'-8"	—
h ₄₁ (E)	26	# 5	7'-5"	—
h ₅₀ (E)	22	# 4	10'-8"	—
h ₅₁ (E)	34	# 5	10'-8"	—
h ₅₂ (E)	26	# 4	13'-11"	—
h ₆₀ (E)	22	# 4	11'-8"	—
h ₆₁ (E)	44	# 4	14'-11"	—
n ₁₀ (E)	24	# 5	5'-3"	—
n ₂₀ (E)	28	# 8	9'-6"	—
n ₃₀ (E)	60	# 7	12'-1"	—
n ₄₀ (E)	24	# 5	5'-3"	—
n ₅₀ (E)	28	# 8	9'-6"	—
n ₆₀ (E)	60	# 7	12'-1"	—
t ₁₀ (E)	24	# 5	7'-5"	—
t ₁₁ (E)	24	# 5	7'-5"	—
t ₂₀ (E)	26	# 8	10'-8"	—
t ₂₁ (E)	26	# 5	10'-8"	—
t ₃₀ (E)	28	# 9	17'-2"	—
t ₃₁ (E)	28	# 6	17'-2"	—
t ₄₀ (E)	24	# 5	7'-5"	—
t ₄₁ (E)	24	# 5	7'-5"	—
t ₅₀ (E)	26	# 8	10'-8"	—
t ₅₁ (E)	26	# 5	10'-8"	—
t ₆₀ (E)	28	# 9	17'-2"	—
t ₆₁ (E)	28	# 6	17'-2"	—
v ₁₀ (E)	24	# 5	6'-10"	—
v ₁₁ (E)	8	# 4	6'-10"	—
v ₁₂ (E)	18	# 5	8'-10"	—
v ₁₃ (E)	18	# 5	6'-7"	—
v ₂₀ (E)	28	# 5	12'-4"	—
v ₂₁ (E)	8	# 4	12'-4"	—
v ₂₂ (E)	24	# 5	10'-10"	—
v ₂₃ (E)	24	# 5	8'-0"	—
v ₃₀ (E)	32	# 5	9'-6"	—
v ₃₁ (E)	8	# 4	18'-6"	—
v ₃₂ (E)	32	# 7	12'-4"	—
v ₄₀ (E)	24	# 5	6'-10"	—
v ₄₁ (E)	8	# 4	6'-10"	—
v ₄₂ (E)	18	# 5	8'-10"	—
v ₄₃ (E)	18	# 5	6'-7"	—
v ₅₀ (E)	28	# 5	12'-4"	—
v ₅₁ (E)	8	# 4	12'-4"	—
v ₅₂ (E)	24	# 5	10'-10"	—
v ₅₃ (E)	24	# 5	8'-0"	—
v ₆₀ (E)	32	# 5	9'-6"	—
v ₆₁ (E)	8	# 4	18'-6"	—
v ₆₂ (E)	32	# 7	12'-4"	—
w ₁₀ (E)	36	# 5	10'-8"	—
w ₂₀ (E)	48	# 5	12'-2"	—
w ₃₀ (E)	72	# 5	13'-2"	—
w ₄₀ (E)	36	# 5	10'-8"	—
w ₅₀ (E)	48	# 5	12'-2"	—
w ₆₀ (E)	72	# 5	13'-2"	—
Porous Granular Embankment		Cu. Yd.	224	
Structure Excavation, Special		Cu. Yd.	1,195	
Concrete Structures		Cu. Yd.	273.4	
Reinforcement Bars, Epoxy Coated		Pound	24,940	
Geocomposite Wall Drain		Sq. Yd.	131	
Pipe Underdrain for Structures, 4"		Foot	156	
Rubbed Finish		Sq. Ft.	241	
Form Liner Textured Surface, Special		Sq. Ft.	1104	
Staining Concrete Structures		Sq. Yd.	123	

BARS n₁₀(E), n₂₀(E), n₄₀(E) & n₅₀(E)

Bar	A	B	C
n ₁₀ (E)	4'-8"	7"	5"
n ₂₀ (E)	8'-7"	11"	8"
n ₄₀ (E)	4'-8"	7"	5"
n ₅₀ (E)	8'-7"	11"	8"



BARS n₃₀(E) or n₆₀(E)



BARS v₃₂(E) or v₆₂(E)

MIN. BAR LAP

Bar Size	Class C
#7	5'-2"

Note:
 Maximum factored bearing pressure = 3,150 psf
 Factored bearing resistance available = 4,500 psf
 Maximum net allowable bearing resistance = 3,000 psf

PIPE UNDERDRAIN DETAIL
 * Included in the cost of Pipe Underdrain for Structures, 4"

N:\PROJ\0220087\01\Rollins\Design\Structure\CAD\0220087_01_007_Wingwall_Details.dgn



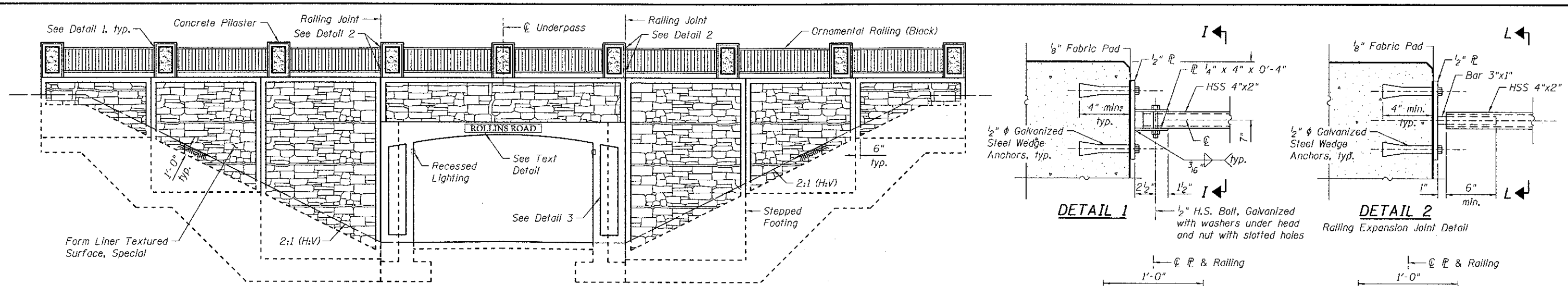
USER NAME	DESIGNED	REVISIONS
rdanley	MHT	-
	APD	-
	SRG	-
	APD	-

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

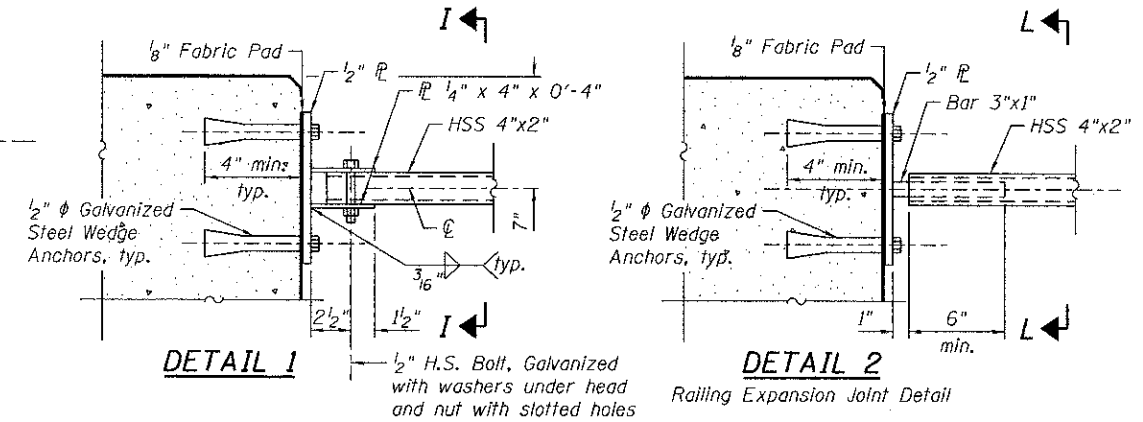
**WINGWALL DETAILS
STRUCTURE NO. 049-N008**
SHEET NO. S-7 OF S-12 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	56

CONTRACT NO. 63807
ILLINOIS FED. AID PROJECT

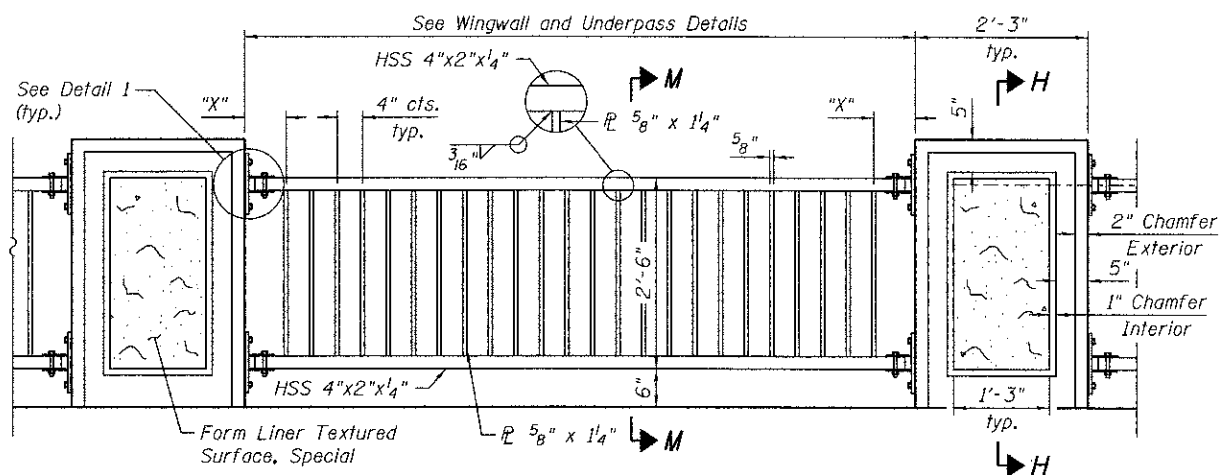


TYPICAL END SECTION



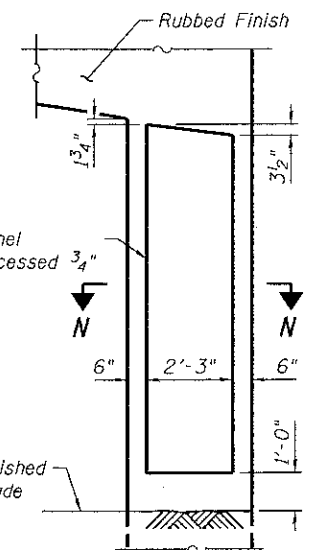
DETAIL 1

DETAIL 2



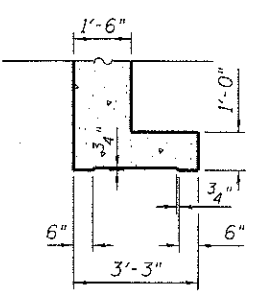
TYPICAL RAILING ELEVATION

Dimension "X" Equals Remaining Distance After Even Plate Spacing

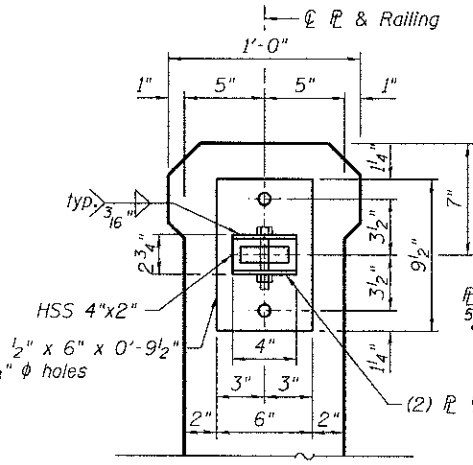


DETAIL 3

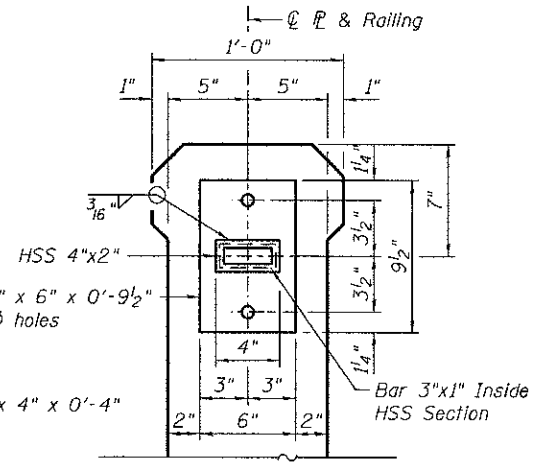
Recessed Panel Detail



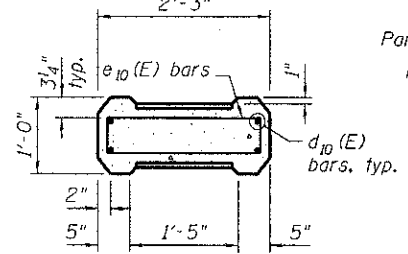
SECTION N-N



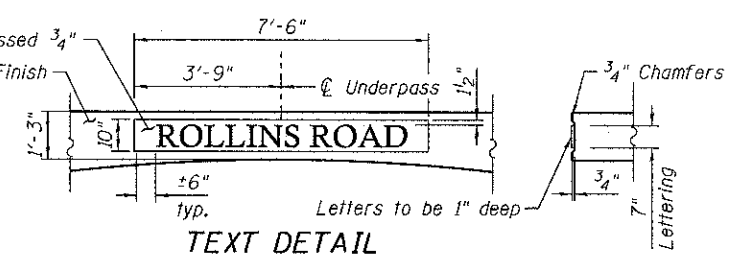
SECTION I-I



SECTION L-L

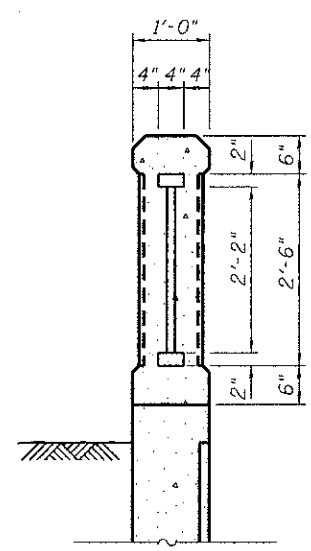


SECTION K-K

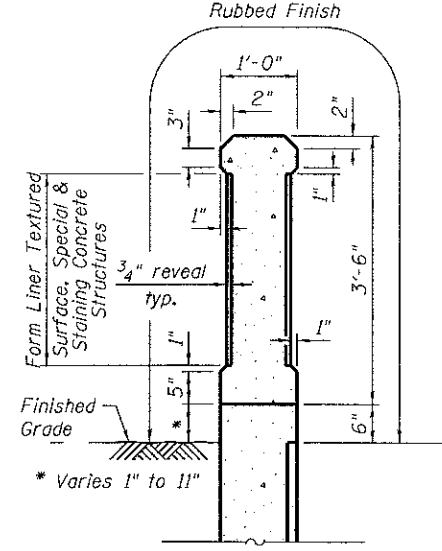


TEXT DETAIL

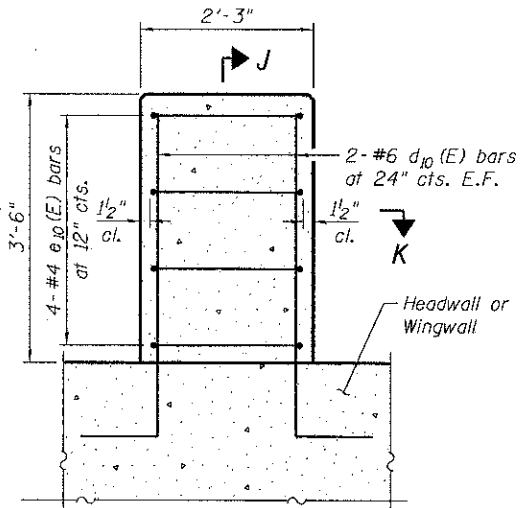
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SECTION M-M

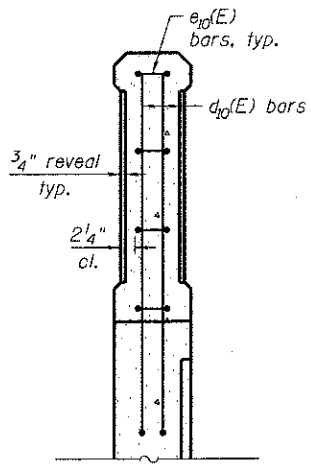


SECTION H-H

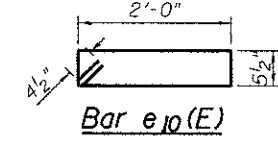


PILASTER REINFORCING

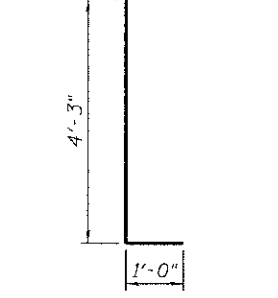
(Front Face)



SECTION J-J



Bar e10(E)



Bar d10(E)

BILL OF MATERIAL

(For Pilasters)

Bar	No.	Size	Length	Shape
d10(E)	72	#6	5'-3"	□
e10(E)	72	#4	5'-8"	□
Item	Unit	Quantity		
Concrete Structures	Cu. Yd.	5.3		
Rubbed Finish	Sq. Ft.	338		
Ornamental Railing	Foot	145		
Reinforcement Bars, Epoxy Coated	Pound	850		
Form Liner Textured Surface, Special	Sq. Ft.	113		
Staining Concrete Structures	Sq. Yd.	13		

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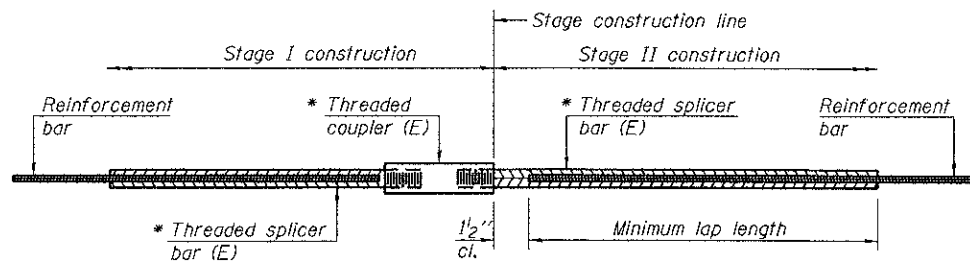
Clorba Group, Inc.
CONSULTING ENGINEERS
587 North Combsburg Avenue
Suite 202 - Chicago, Illinois 60614
Tel: 773.378.4200
Fax: 773.378.4204
Email: clorba@clorba.com

USER NAME = rdenley	DESIGNED - SWY	REVISED -
PLOT SCALE = 5/8"=1'-0"	CHECKED - BWS	REVISED -
PLOT DATE = 4/8/2013	DRAWN - RD	REVISED -
	CHECKED - BWS	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

ARCHITECTURAL DETAILS
STRUCTURE NO. 049-N008
SHEET NO. S-8 OF S-12 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	57
				CONTRACT NO. 63807
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

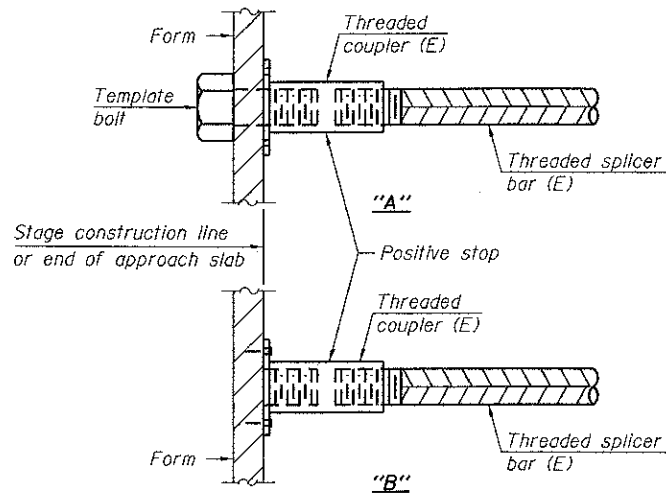
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1/2" + thread length

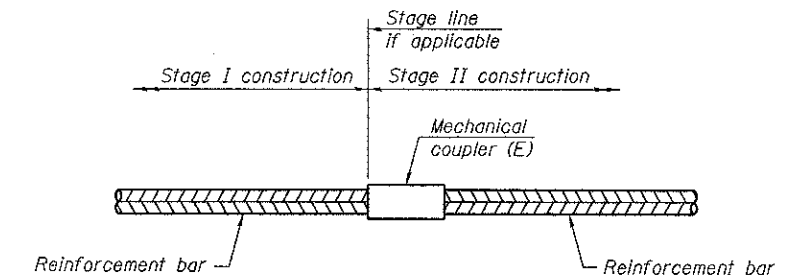
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Underpass Footing	#5	24	Table 5
Top Slab	#5	41	Table 5
Underpass Sidewall	#5	58	Table 5



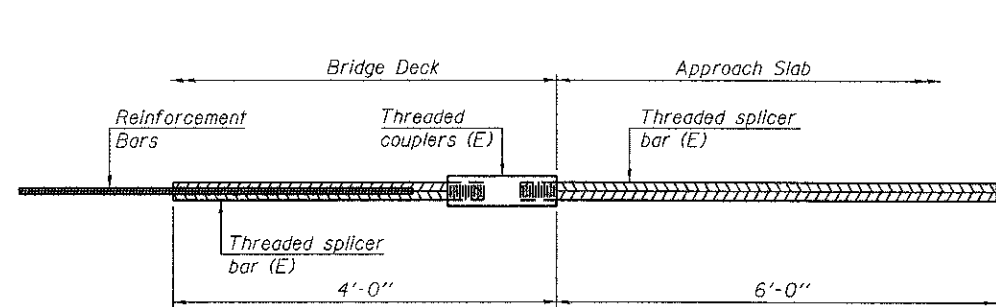
INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



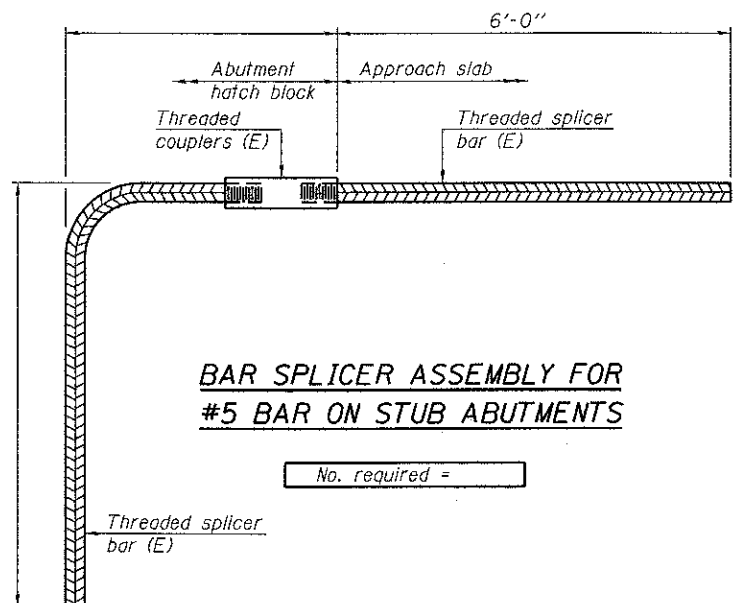
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

N:\PROJECTS\2020087\01\1\Rail\ms\Design\Structure\1\CAD\0202087_01_009_Bar_Splicer.dgn
 BSD-1
 1-27-12

BSD-1

1-27-12



USER NAME = rdanley	DESIGNED = SMY	REVISED =
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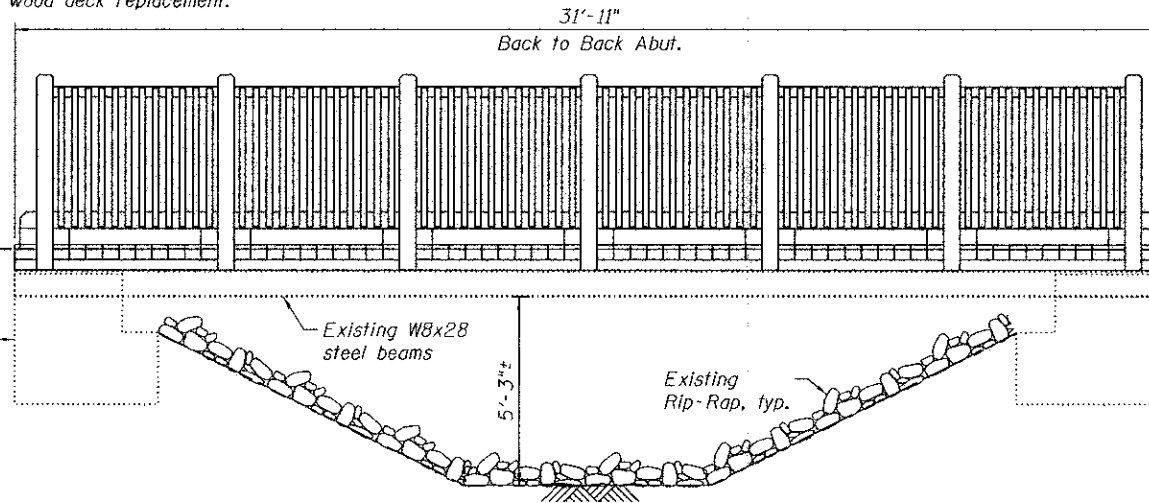
**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 049-N008
 SHEET NO. S-9 OF S-12 SHEETS

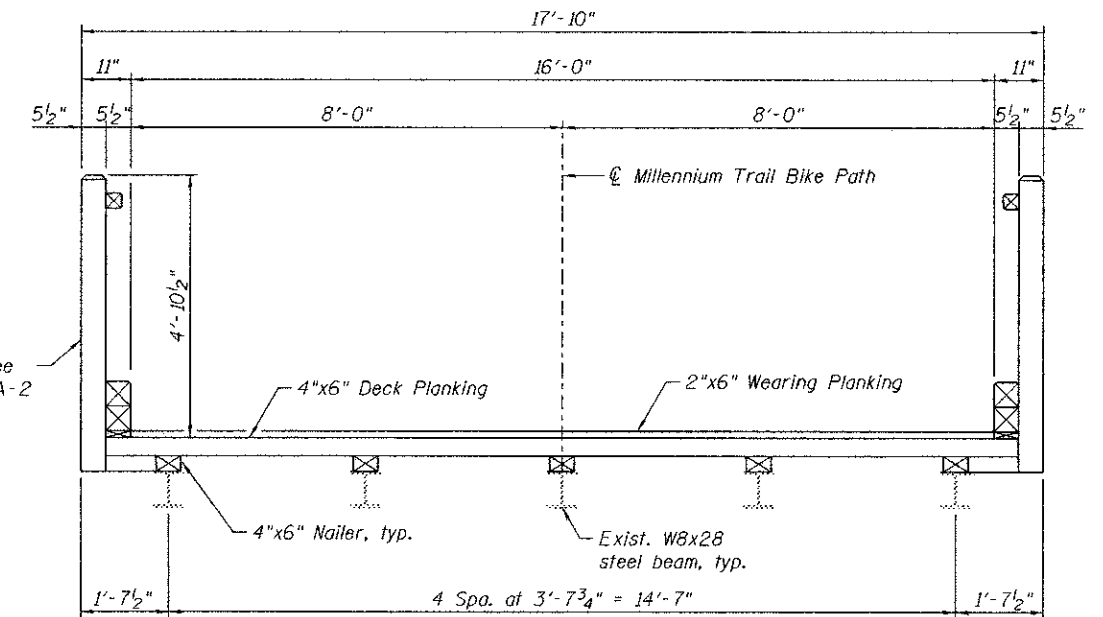
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	58

CONTRACT NO. 63807
 ILLINOIS FED. AID PROJECT

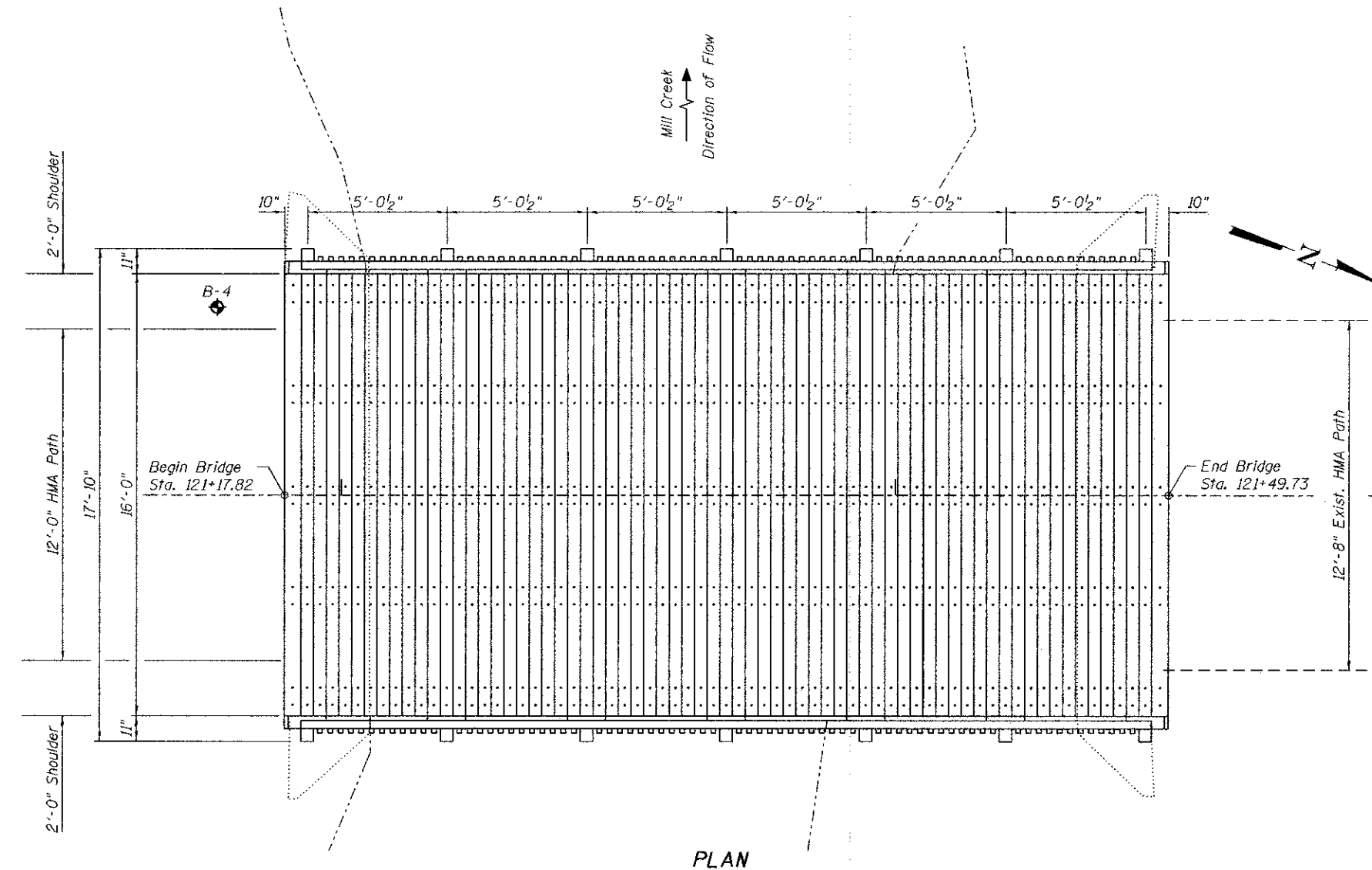
Existing Structure: The existing structure consists of a single span wood plank deck on steel WF beams supported on concrete abutments. The foundations are unknown. Back to back of abutments measures 31'-11". Out to out deck measures 16'-0 1/2". The path will be closed during wood deck replacement.



ELEVATION



PROPOSED SECTION



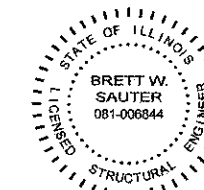
PLAN

SCOPE OF WORK

1. Remove and replace existing wood deck.
2. Furnish and install new railings.

INDEX OF SHEETS:

- SA-1 General Plan, Elevation & Cross Section
- SA-2 Deck and Railing Layout
- SA-3 Railing Details
- SA-4 Soil Boring



DATE: 4/5/2013
SEAL EXPIRES: 11/30/2014

I certify that to the best of knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.

DESIGN SPECIFICATIONS

- 2009 AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition
- 2012 AASHTO LRFD Bridge Design Specifications with 2012 Interims
- 2012 National Design Specifications for Wood Construction

DESIGN STRESSES

FIELD UNITS

- $f_y = 36,000$ psi (Existing Beams)
- $f_b = 1,650$ psi (Timber Members)

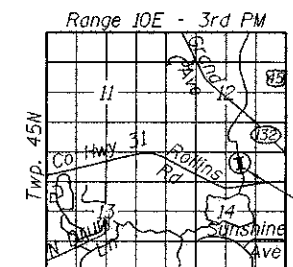
LOADING H-5

No allowance for future wearing surface.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
* Removal of Existing Timber Members	L. Sum	1
Treated Timber	F.B.M.	4,610
Hardware	Pound	260

* See Special Provisions



LOCATION SKETCH

**GENERAL PLAN, ELEVATION & CROSS SECTION
MILLENNIUM BIKE PATH OVER MILL CREEK BRIDGE
SEC. 12-F3000-01-BT
LAKE COUNTY
STATION 121+33.78
STRUCTURE NUMBER 049-P003**

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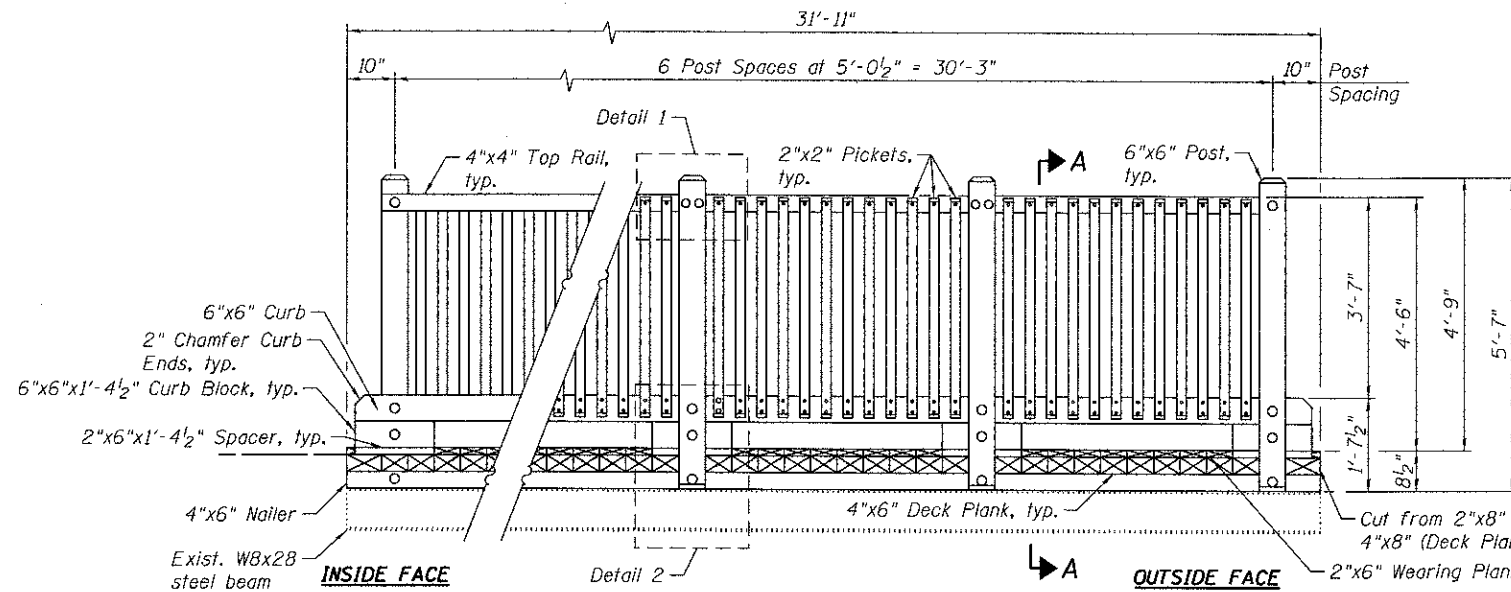
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**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

SHEET NO. SA-1 OF SA-4 SHEETS

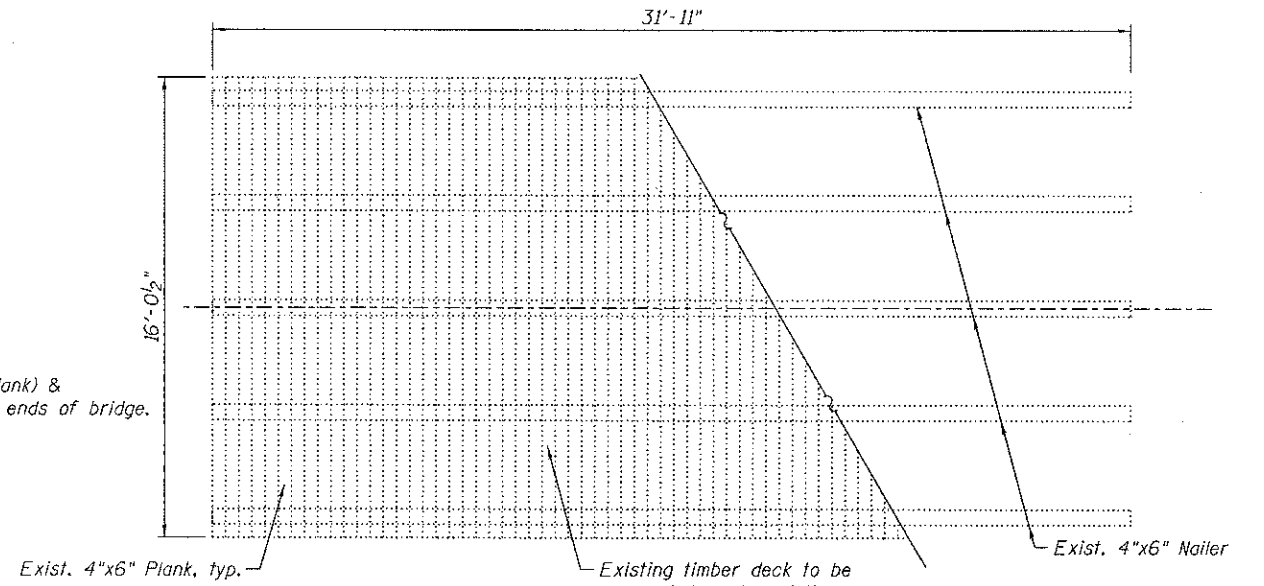
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CONTRACT NO. 63807
ILLINOIS FED. AID PROJECT

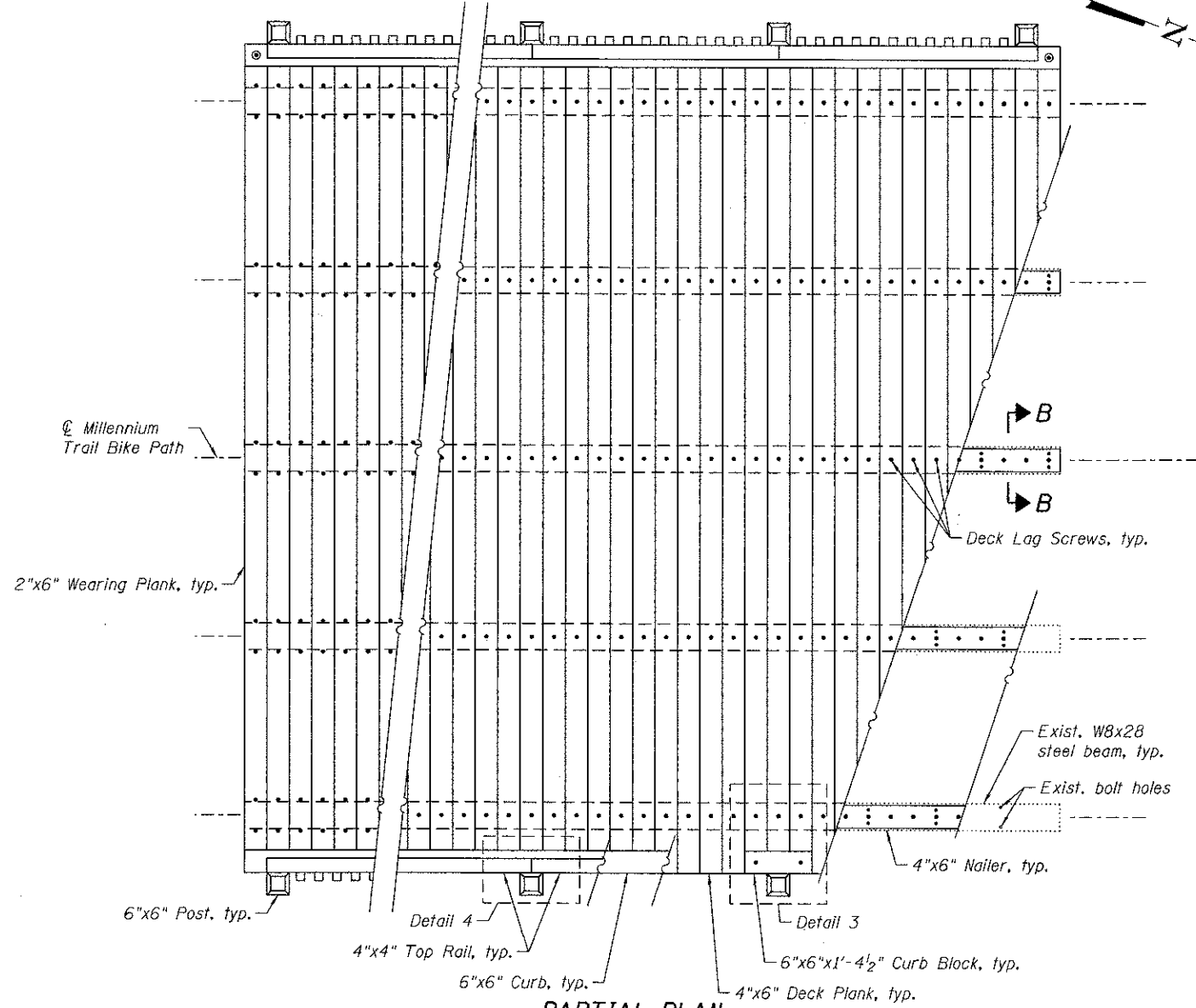


PARTIAL RAILING ELEVATION

See Sheet SA-3 for Details 1 and 2 and Section A-A.



REMOVAL PLAN



PARTIAL PLAN

See Sheet SA-3 for Details 3 and 4 and Section B-B.

GENERAL NOTES:

- Owner is defined as the Lake County Forest Preserve District.
- Bridge construction to be completed by qualified and experienced contractor approved by owner.
- Bridge contractor will perform all work from deck level.
- Bridge contractor will clean up bridge work site daily, and the contractor shall provide the appropriate dumpster for material removal.
- Owner is responsible for posting load limiting signs and/or barriers at each end of bridge.
- The contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Sawn lumber: unless otherwise specified.

- All sawn lumber shall be Southern Yellow Pine and graded under the Southern Pine Inspection Bureau (SPIB) rules.
- All sawn lumber shall be grade No. 1 or better, S4S (Surface Four Sides).
- All sawn lumber shall be preservative treated in accordance with AWP standard U1, Commodity Specification (E).
- Where lumber is specified K.D.A.T., K.D.A.T. shall be defined as kiln dried after treatment to a 19% or less moisture content.
- Exposed corners shall be beveled/routed and sanded to remove splinters/sharp edges.

Hardware: unless otherwise specified.

- Steel bolts shall meet the requirements of ASTM A307-10.
- Metal hardware including nails, bolts, nuts, washers, fasteners, straps, and clips shall be zinc-coated hot dipped galvanized steel meeting the requirements of ASTM A153 and/or ASTM A653, G-185.

Decking:

- Decking shall be butted tightly board to board to allow for board shrinkage after deck construction.
- Deck to be attached with 304 stainless steel or better lag screws recessed 1/4" below deck surface. Pre-drill all deck screws prior to installation.
- No splices shall be allowed for bridge decking.

Pickets:

- Pickets to be attached with #10x3" stainless steel or better screws, recessed 1/8" below picket surface.

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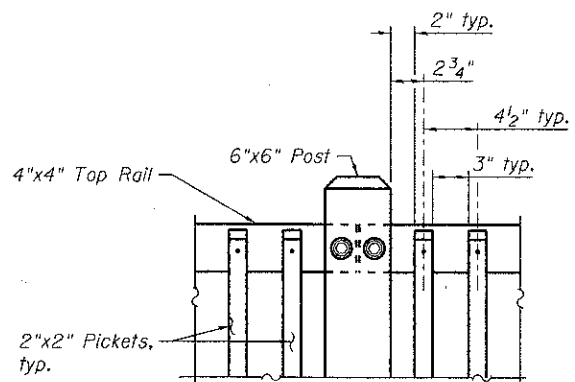
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**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

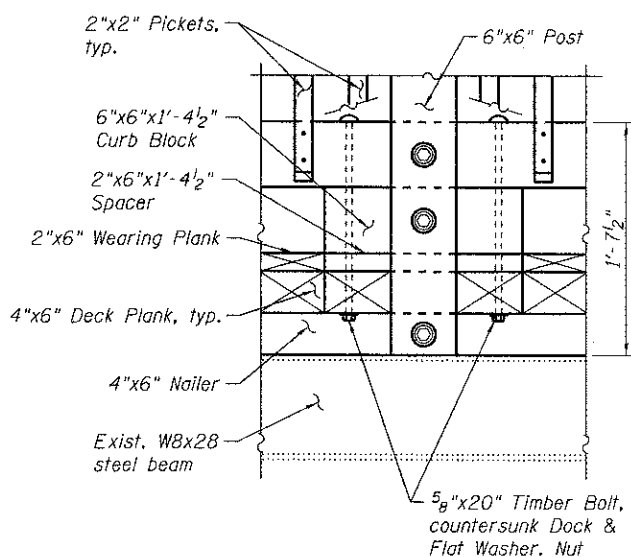
**DECK AND RAILING LAYOUT
MILLENNIUM BIKE PATH OVER MILL CREEK BRIDGE**

SHEET NO. SA-2 OF SA-4 SHEETS

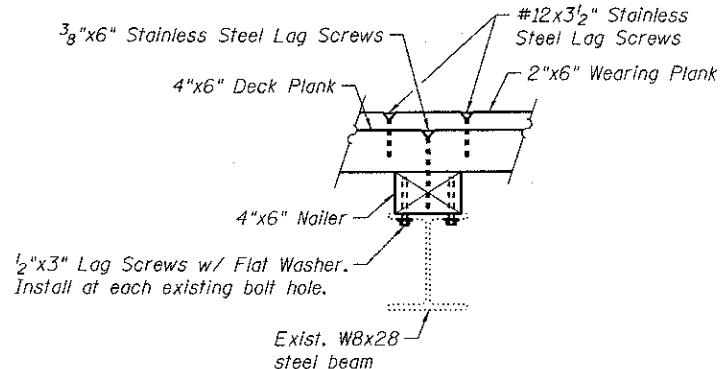
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				CONTRACT NO. 63807
ILLINOIS FED. AID PROJECT				



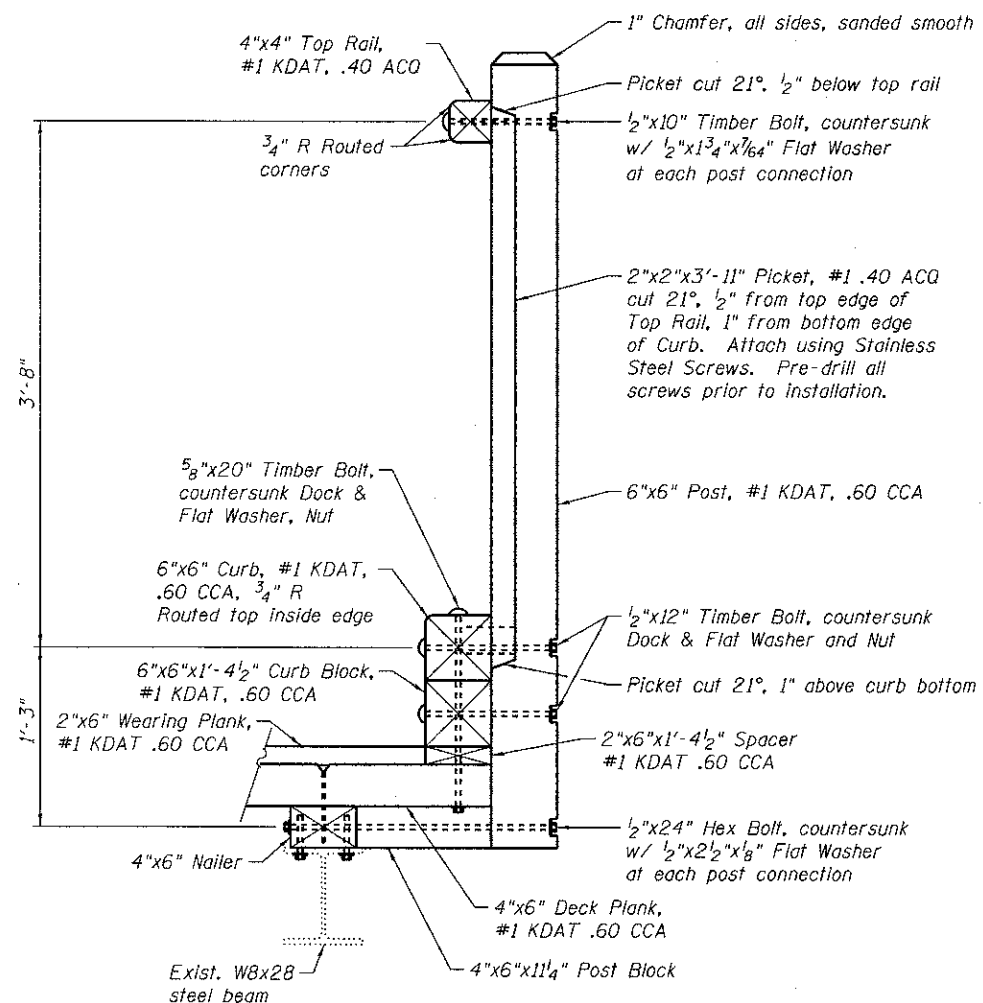
DETAIL 1



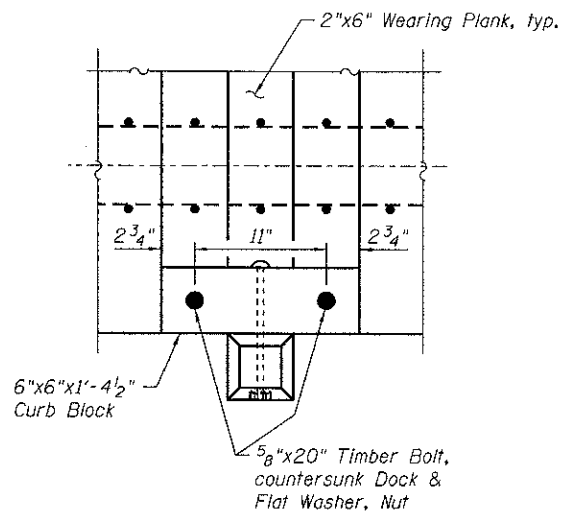
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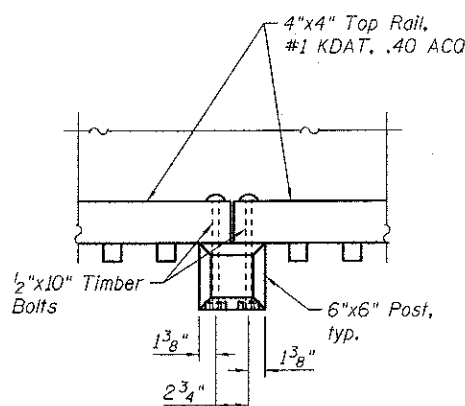
SECTION B-B
DECK CONNECTION DETAIL



SECTION A-A
RAILING CONNECTION DETAIL



DETAIL 3



DETAIL 4

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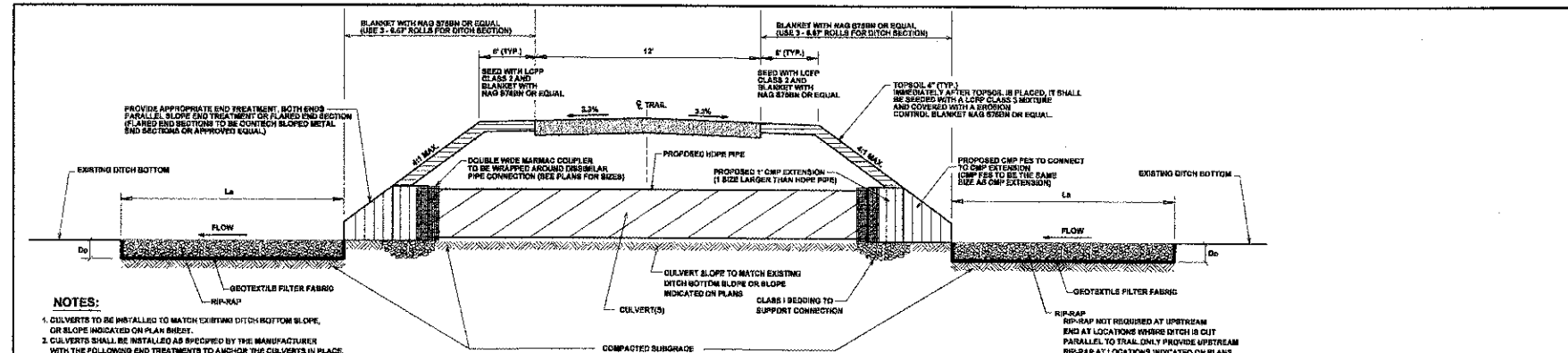
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**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**RAILING DETAILS
MILLENNIUM BIKE PATH OVER MILL CREEK BRIDGE**

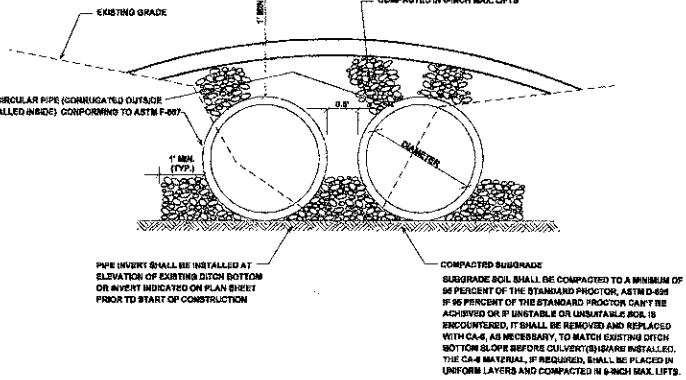
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CONTRACT NO. 63807				
ILLINOIS FED. AID PROJECT				

SHEET NO. SA-3 OF SA-4 SHEETS

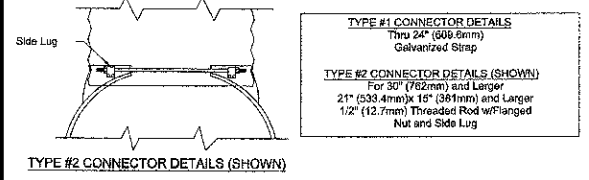
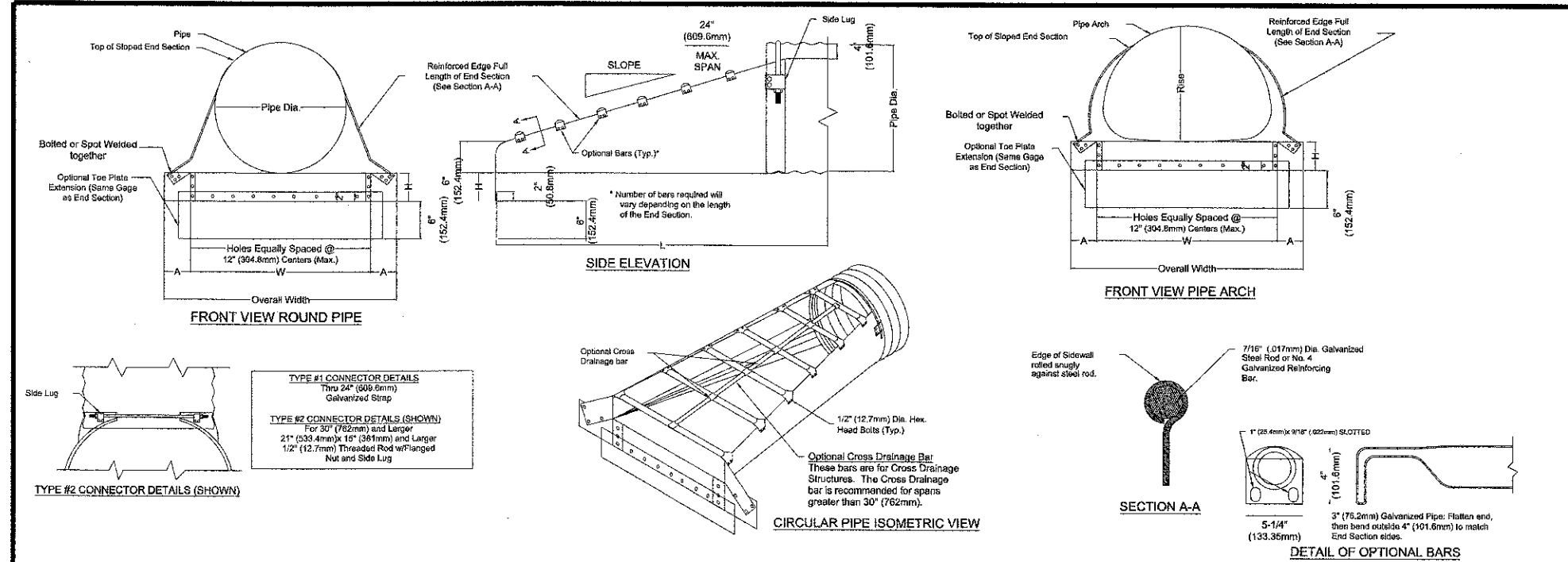


NOTES:

- CULVERTS TO BE INSTALLED TO MATCH EXISTING DITCH BOTTOM SLOPE, OR SLOPE INDICATED ON PLAN SHEETS.
- CULVERTS SHALL BE INSTALLED AS SPECIFIED BY THE MANUFACTURER WITH THE FOLLOWING END TREATMENTS TO ANCHOR THE CULVERTS IN PLACE:
 - FOR CULVERTS SHALL BE INSTALLED WITH APPROPRIATE PARALLEL SLOPE END TREATMENT.
 - CIRCULAR PIPE SHALL BE INSTALLED WITH APPROPRIATE FLARED END SECTION.
- JOINTS FOR CONCRETE PIPE SHALL TYPICALLY BE A TYPICAL APPLIED BITUMINOUS MASTIC COMPOUND IN ACCORDANCE WITH ASTM C-9.
- JOINTS FOR HDPE PIPE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- RIP-RAP SHALL BE INSTALLED AT THE UPSTREAM AND DOWNSTREAM END OF CULVERT(S), INSTALLED IN EXISTING CHANNELS, OR DITCH.
- CONTRACTOR TO PROVIDE PROPER DITCH TRANSITIONS PER DETAIL THIS SHEET. ALL DISTURBED DITCH SIZE SLOPES SHALL BE COMPACTED TO A MINIMUM 90% OF STANDARD PROCTOR.



TRAIL CULVERT CROSSING



METAL END SECTIONS FOR ROUND PIPE

Pipe Dia. (in.)	Min. Thick (in.)	Dimensions (inches)				L Dimensions				
		Gage	A	H	W	Overall width	Slope	Length (in.)	Slope	Length (in.)
15	.064	16	8	6	21	37	6:1	30	4:1	20
18	.064	16	8	8	24	40	6:1	48	4:1	32
21	.064	16	8	8	27	43	6:1	66	4:1	44
24	.064	16	8	8	30	46	6:1	84	4:1	56
30	.109	12	12	9	36	60	6:1	120	4:1	80

METAL END SECTIONS FOR ROUND PIPE

Pipe Dia. (mm)	Min. Thick (mm)	Dimensions (mm)				L Dimensions				
		Gage	A	H	W	Overall width	Slope	Length (mm)	Slope	Length (mm)
381	1.626	16	203.2	152.4	533.4	939.8	6:1	762	4:1	508
457.2	1.626	16	203.2	152.4	609.6	1016	6:1	1219.2	4:1	812.8
533.4	1.626	16	203.2	152.4	685.8	1092.2	6:1	1676.4	4:1	1117.6
609.6	1.626	16	203.2	152.4	762	1168.4	6:1	2133.6	4:1	1422.4
762	2.769	12	304.8	228.6	914.4	1524	6:1	3048	4:1	2032

METAL END SECTIONS FOR PIPE ARCH

Equip. Dia. (in.)	span (in.)	rise (in.)	Min. Thick (in.)	Dimensions (inches)				L Dimensions				
				Gage	A	H	W	Overall width	Slope	Length (in.)	Slope	Length (in.)
18	21	15	.064	16	8	6	27	43	6:1	30	4:1	20
21	24	18	.064	16	8	6	30	46	6:1	48	4:1	32
24	28	20	.064	16	8	6	34	50	6:1	60	4:1	40
30	36	24	.078	14	12	9	41	65	6:1	84	4:1	56
36	42	29	.109	12	12	9	48	72	6:1	114	4:1	76

METAL END SECTIONS FOR PIPE ARCH

Equip. Dia. (mm)	span (mm)	rise (mm)	Min. Thick (mm)	Dimensions (mm)				L Dimensions				
				Gage	A	H	W	Overall width	Slope	Length (mm)	Slope	Length (mm)
457.2	533.4	381	1.626	16	203.2	152.4	685.8	1092.2	6:1	762	4:1	508
533.4	609.6	457.2	1.626	16	203.2	152.4	762	1168.4	6:1	1219.2	4:1	812.8
609.6	711.2	508	1.626	16	203.2	152.4	863.6	1270	6:1	1624	4:1	1016
762	914.4	609.6	2.007	14	304.8	228.6	1041.4	1651	6:1	2133.6	4:1	1422.4
914.4	1066.8	736.6	2.769	12	304.8	228.6	1219.2	1828.8	6:1	2895.6	4:1	1930.4

GENERAL NOTES

- CONNECTORS-Round sizes thru 24\"/>
- TOE PLATE EXTENSIONS-When required, toe plate extensions are to be the same gage as End Section. Dimensions shall be Overall Width less 6\"/>
- OPTIONAL BARS-Bars when specified, shall be Schedule 40 Galvanized Steel Pipe.
- Typically parallel bars are placed on 24\"/>
- Typically the cross bars are used on cross drain applications.
- Holes for bar attachments shall be provided on all end sections.
- Dimensions are subject to manufacturing tolerances.
- These end sections are produced to imperial units (inches), metric units are shown on this drawing for the convenience of some users.



SLOPED END SECTIONS 4:1 & 6:1

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Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

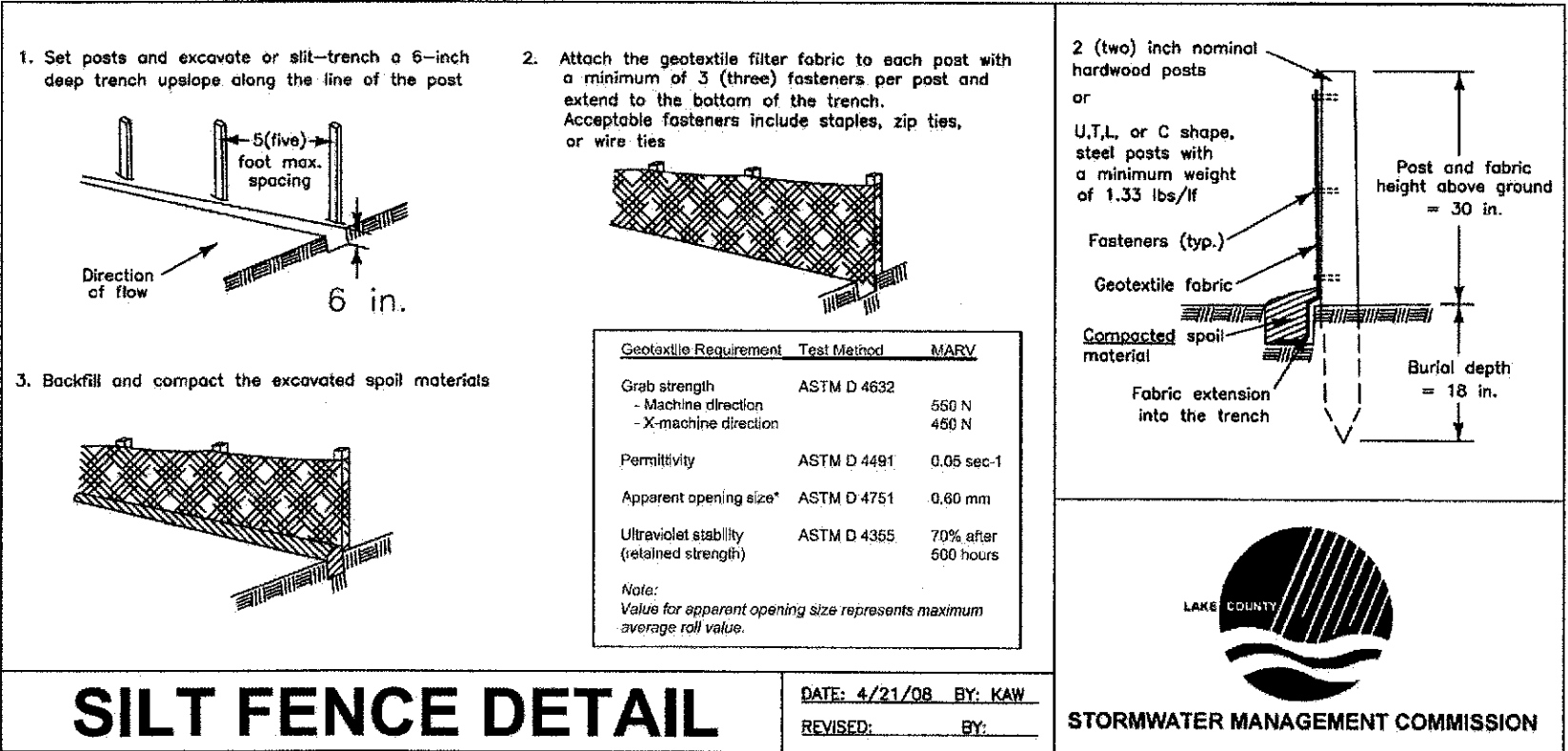
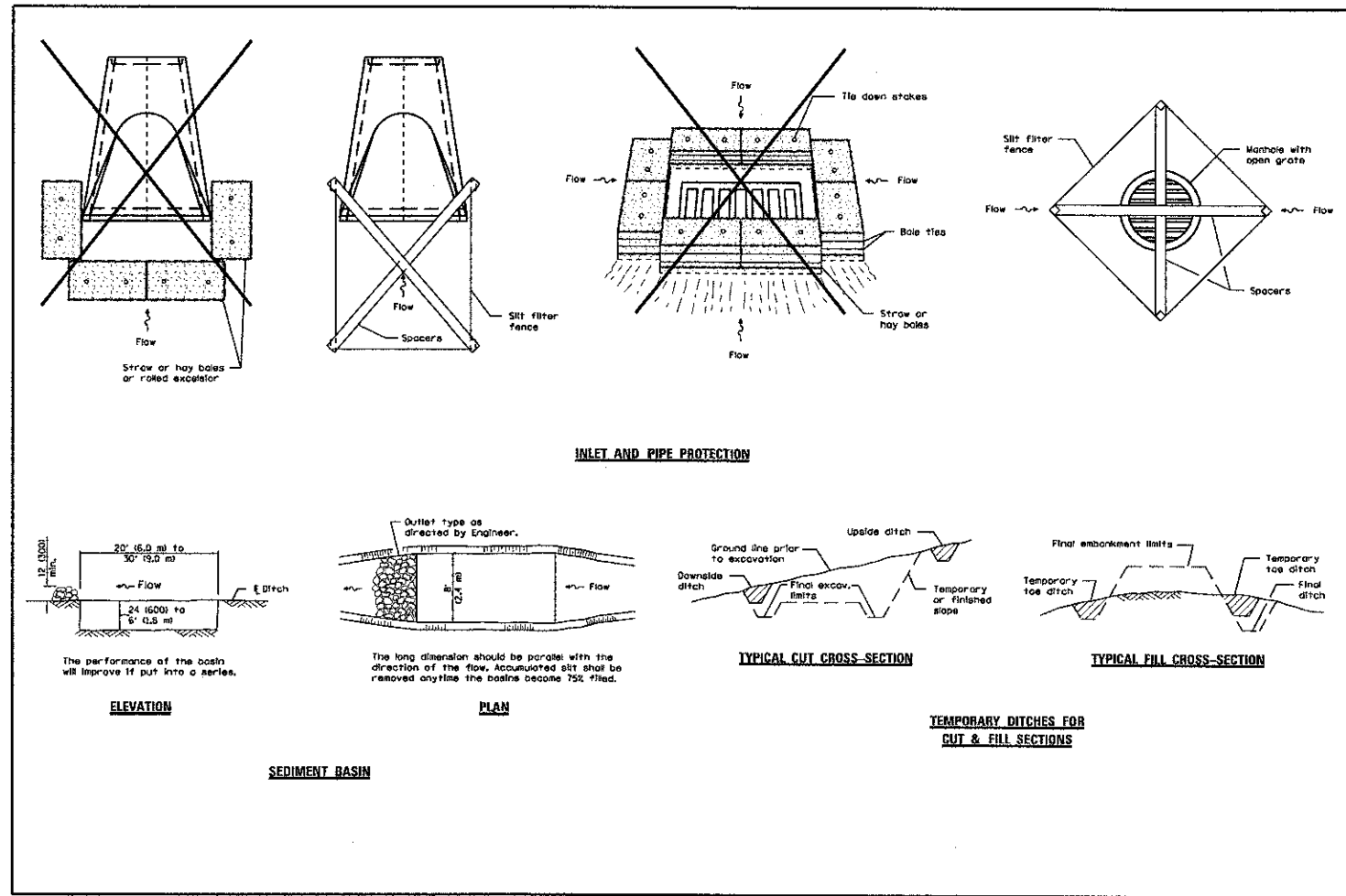
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**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**CULVERT CROSSING & FES DETAIL
ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	66
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	



STORMWATER MANAGEMENT COMMISSION

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**TEMPORARY EROSION CONTROL SYSTEMS DETAIL
ROLLINS ROAD UNDERPASS**

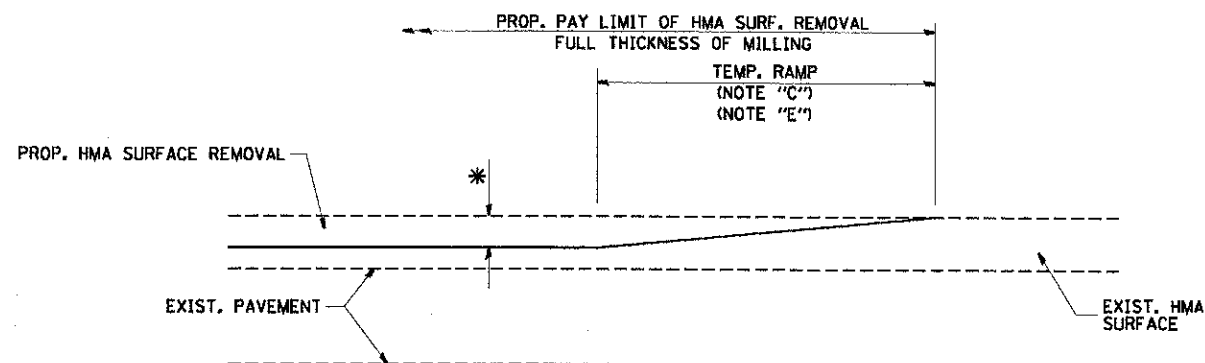
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CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
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Tel. 773.775.4009 Fax 773.775.4014

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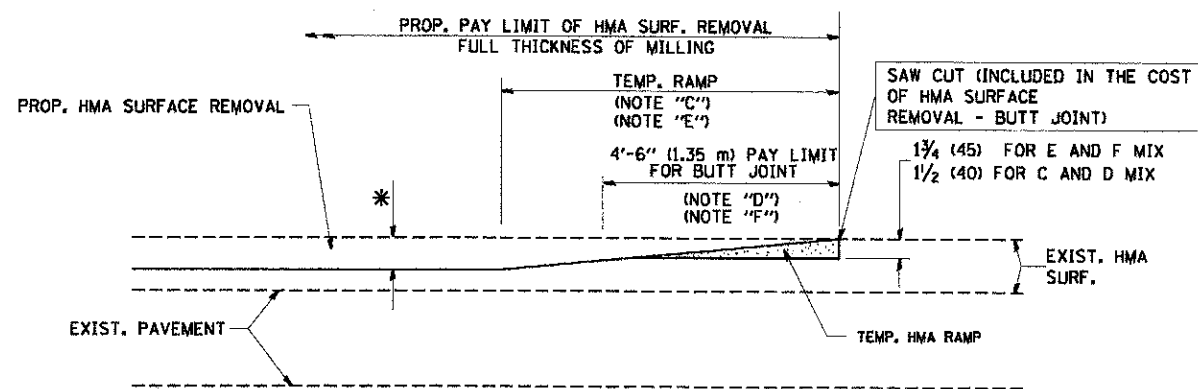
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FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	

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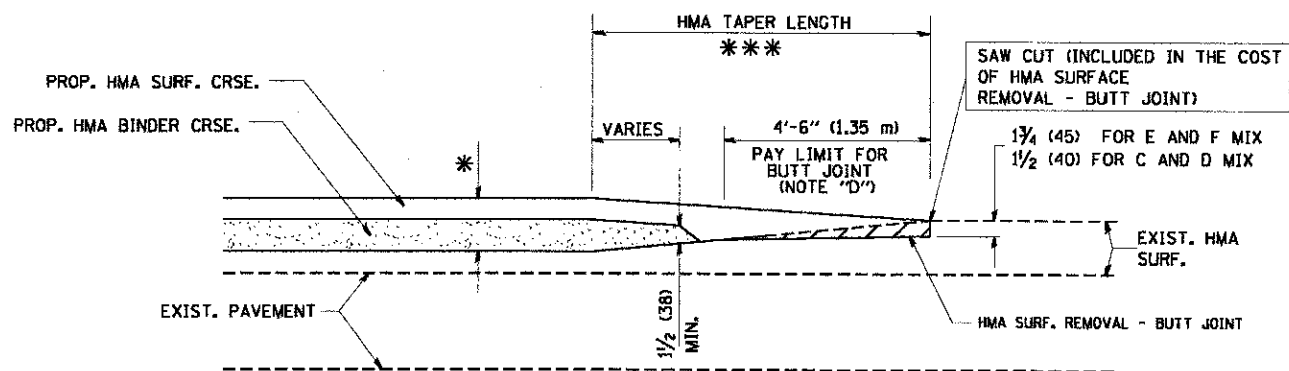
MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1



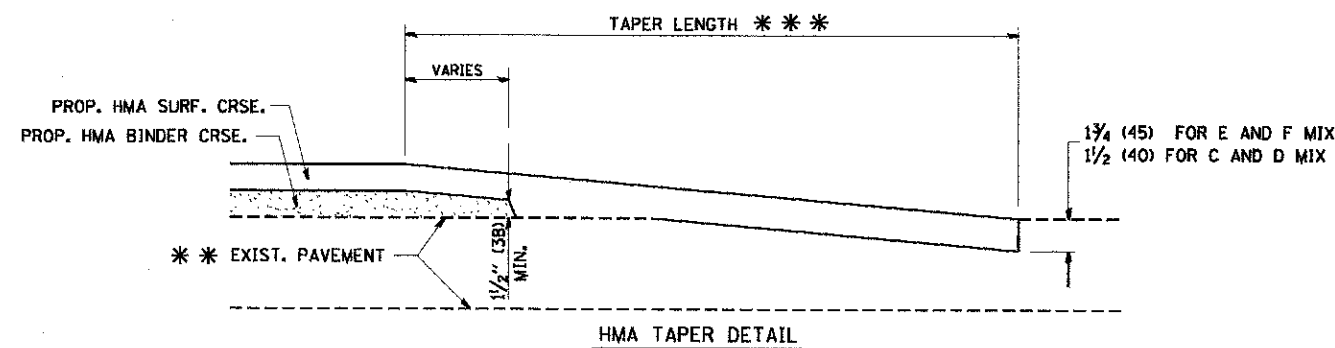
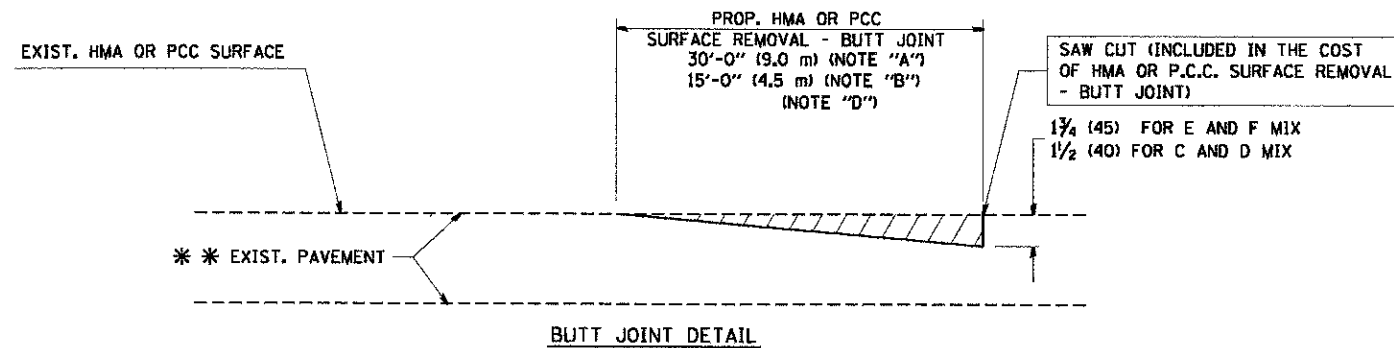
HMA CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2
TYPICAL TEMPORARY RAMP



BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



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.

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DRAWN -
CHECKED -
DATE - 06-13-90

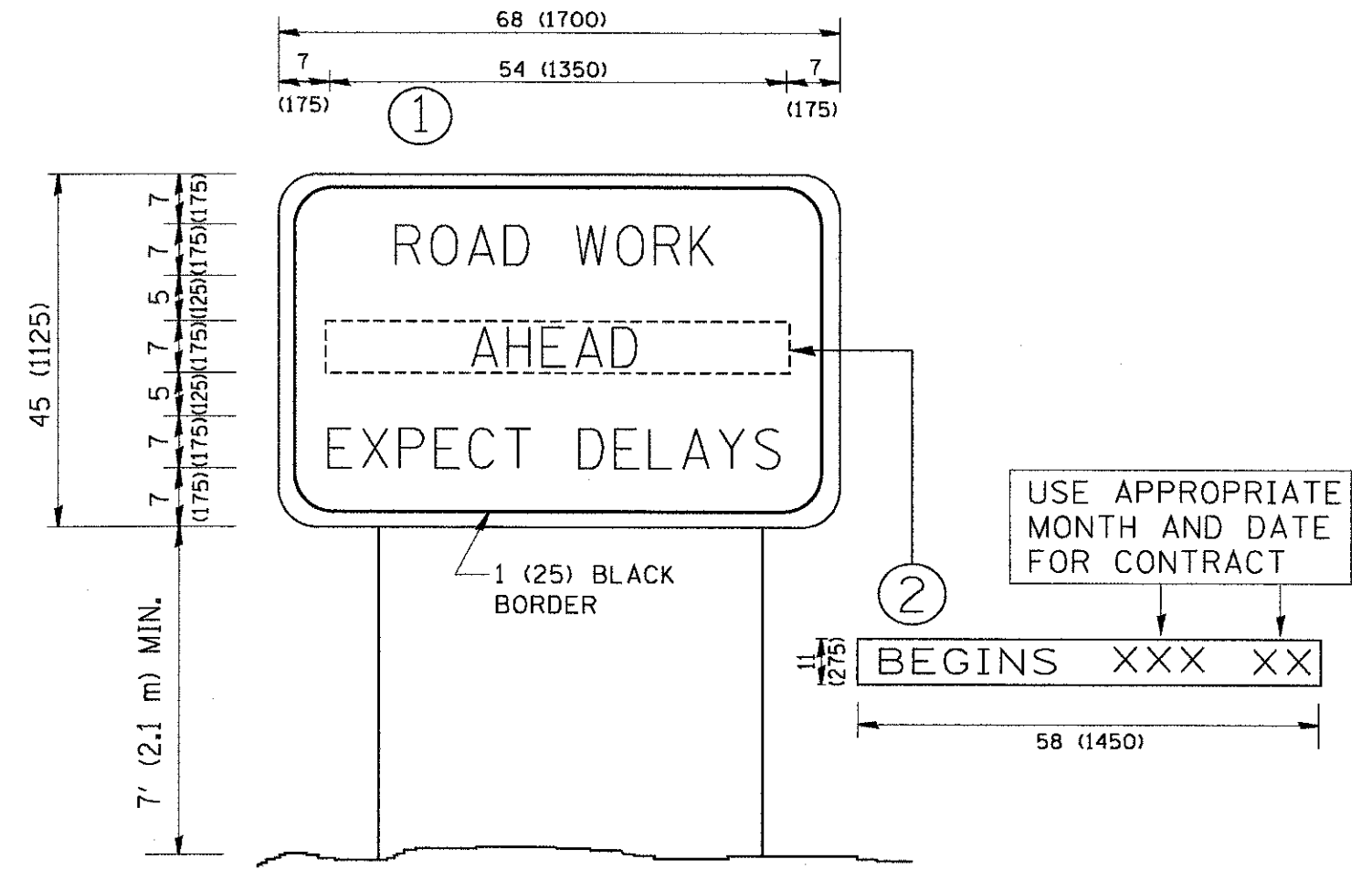
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REVISED - A. ABBAS 03-21-97
REVISED - M. GOMEZ 04-06-01
REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

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

FALL RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	68
BD400-05 BD32			CONTRACT NO. 63807	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

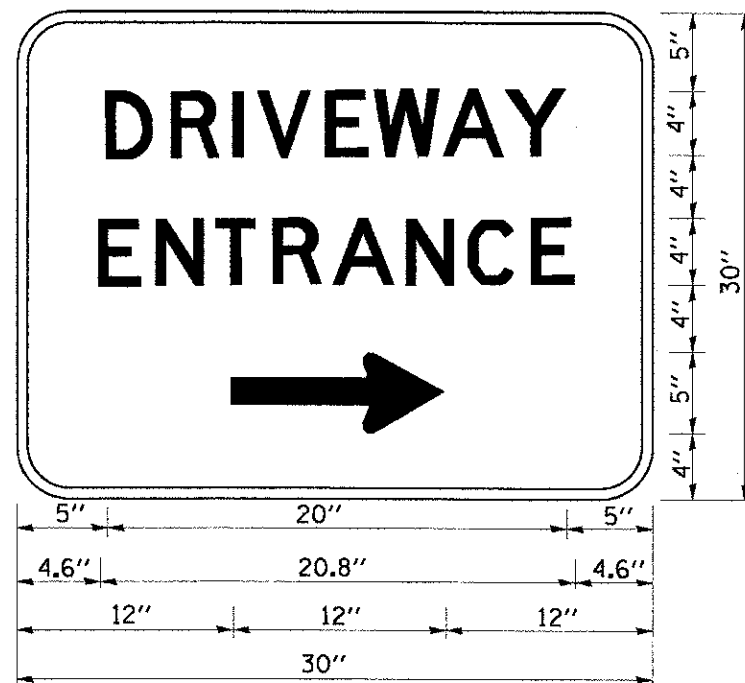
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ARTERIAL ROAD INFORMATION SIGN	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	69
TC-22		CONTRACT NO. 63807		
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:\dotatd\22x34\to26.dgn	USER NAME = gaglianob	DESIGNED -	REVISED - C. JUCIUS 02-15-07
		DRAWN -	REVISED -
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	PLOT DATE = 1/4/2008	DATE -	REVISED -

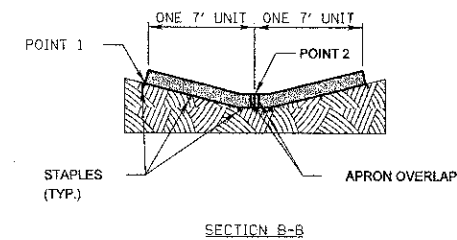
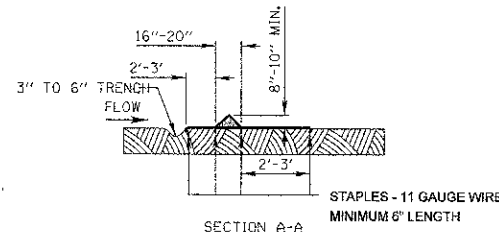
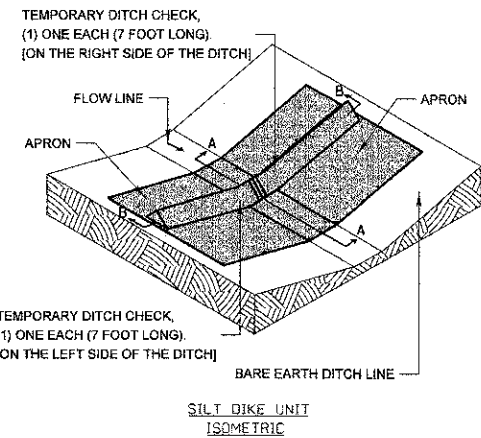
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DRIVEWAY ENTRANCE SIGNING

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	70
TC-26			CONTRACT NO. 63807	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FOR BARE EARTH APPLICATION ONLY

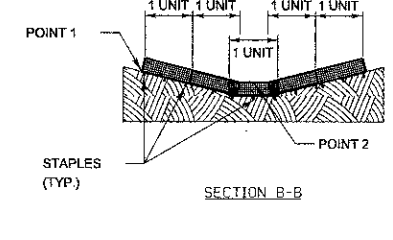
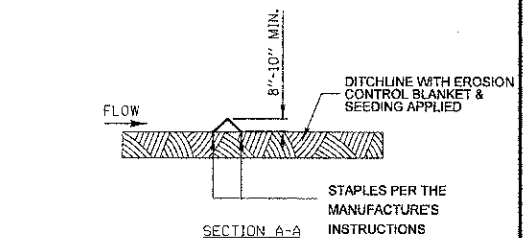
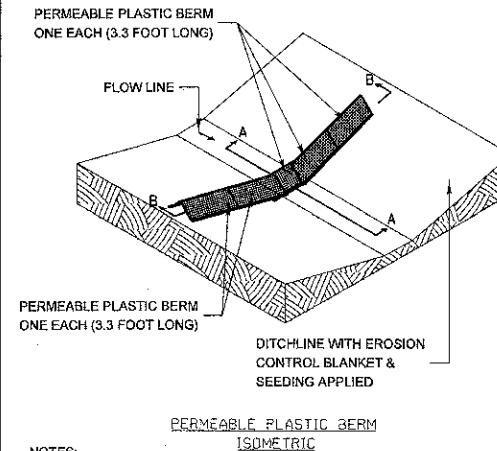


NOTES:
 THE TEMPORARY DITCH CHECK SHALL BE USED IN BARE EARTH DITCH LINES AND SHALL BE REMOVED JUST PRIOR TO THE INSTALLATION OF EROSION CONTROL BLANKET AND SEEDING.
 THE INSTALLATION SHOWN WILL BE MEASURED AND PAID FOR AS A TEMPORARY DITCH CHECK 14 FEET IN LENGTH.
 STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAM.
 POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
ADDED DIMENSIONS	04/11/08	DATE: APRIL 1, 2007
REVISED PAY ITEM	04/15/10	
ADDED PLASTIC BERM (10/22)	10/10/12	

TEMPORARY DITCH CHECK INSTALLATION FOR ROADWAY OR DRAINAGE DITCH
 (SHEET 1 OF 2)

FOR USE WHILE ESTABLISHING FINAL LANDSCAPING

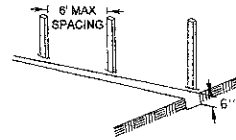


NOTES:
 THE PERMEABLE PLASTIC BERM SHALL REPLACE THE TEMPORARY DITCH CHECK AFTER THE INSTALLATION OF EROSION CONTROL BLANKET AND SEEDING.
 EACH PERMEABLE PLASTIC BERM IS 3.3 FEET IN LENGTH. THE MINIMUM INSTALLATION IN A DITCH SHALL BE THREE UNITS. THE INSTALLATION SHOWN WILL BE MEASURED AND PAID FOR AS A PERMEABLE PLASTIC BERM 16.5 FEET IN LENGTH (5 UNITS).
 STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS THROUGH OR OVER THE BERM AND NOT AROUND THE ENDS.

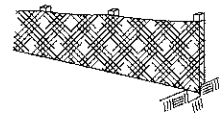
REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
ADDED DIMENSIONS	04/11/08	DATE: APRIL 1, 2007
REVISED PAY ITEM	04/15/10	
ADDED PLASTIC BERM (10/22)	10/10/12	

TEMPORARY DITCH CHECK INSTALLATION FOR ROADWAY OR DRAINAGE DITCH
 (SHEET 2 OF 2)

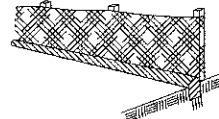
1. SET POSTS AND EXCAVATE OR SLIT-TRENCH A 6-INCH DEEP TRENCH UPSLOPE ALONG THE LINE OF POSTS



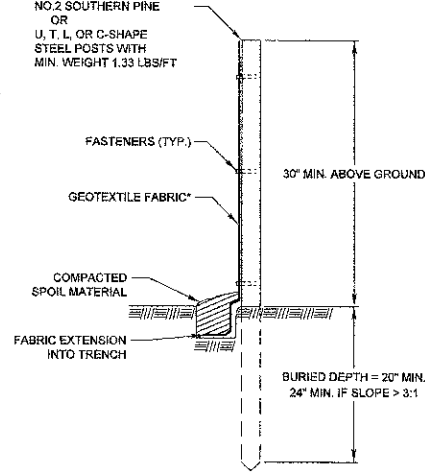
2. ATTACH GEOTEXTILE FILTER FABRIC TO EACH POST WITH A MINIMUM OF 3 (THREE) FASTENERS PER POST AND EXTEND FABRIC TO THE BOTTOM OF THE TRENCH



3. BACKFILL AND COMPACT THE EXCAVATED MATERIALS



POSTS - CHOICE OF:
 1.2" X 1.2" NOMINAL HARDWOOD POSTS
 2.6" X 2.6" NOMINAL NO.2 SOUTHERN PINE OR
 U, T, L, OR C-SHAPE STEEL POSTS WITH MIN. WEIGHT 1.33 LBS/FT



* NOTE: OPTIONAL WIRE SUPPORT
 - MIN. 30" HEIGHT
 - MIN. 14 GAUGE WIRE
 - MIN. 6" HORIZ. WIRES
 - MIN. 6" VERTICAL SPACING

Requirements	Test Methods	Wire Backed Supported Slit Fence *	Geotextile Elongation >=60% *	Geotextile Elongation <60% *
Maximum Post Spacing		4 feet	4 feet	6 feet
Grab Strength		90 lbs	124 lbs	124 lbs
Machine direction	ASTM D 4632	90 lbs	100 lbs	100 lbs
X-Machine direction		90 lbs	100 lbs	100 lbs
Permeability *	ASTM D 4491	0.05 sec ⁻¹	0.05 sec ⁻¹	0.05 sec ⁻¹
Apparent Opening Size	ASTM D 4751	0.024mm, maximum average roll value		
Ultraviolet stability (retained strength)	ASTM D 4355	70% after 500 hours of exposure		

REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
ORIG. BY LC/CMC	4/21/08	DATE: JUNE 20, 2008
Update Year	7/15/11	

PERIMETER EROSION BARRIER INSTALLATION
 SCALE 1" = 1'

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Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5807 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60656
 Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jk_jellman	DESIGNED -	REVISED -
PLOT SCALE = 9.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 4/8/2013	CHECKED -	REVISED -
	DATE -	REVISED -

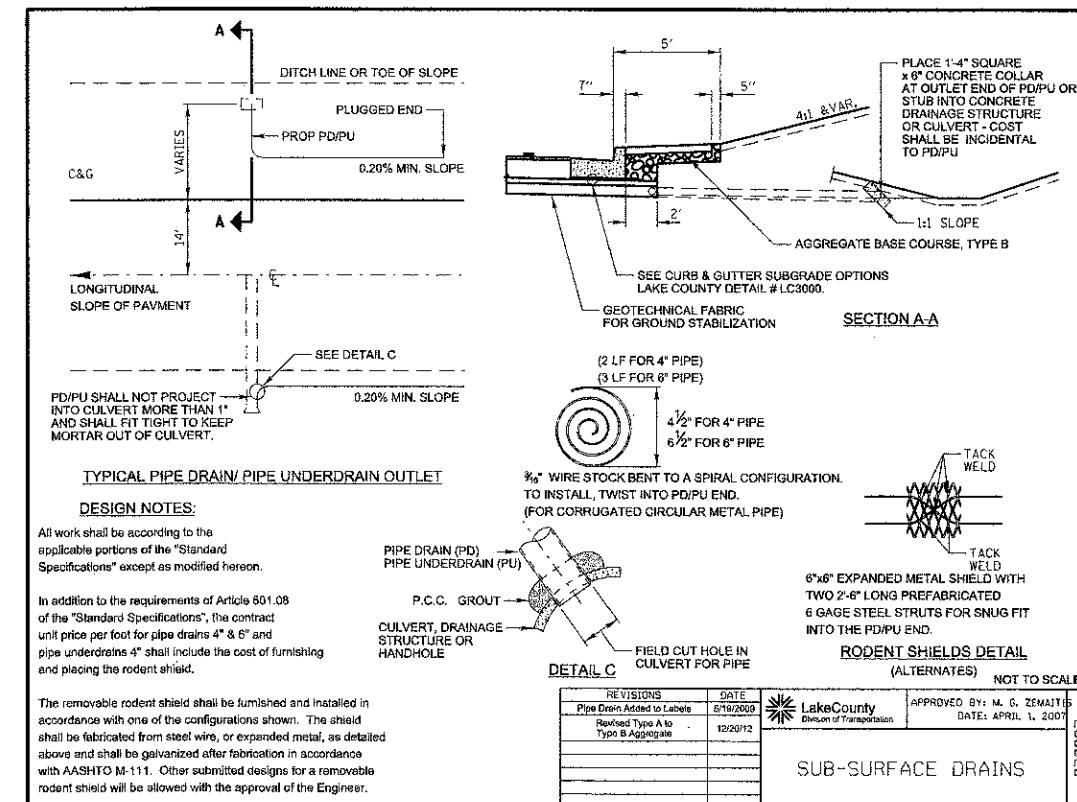
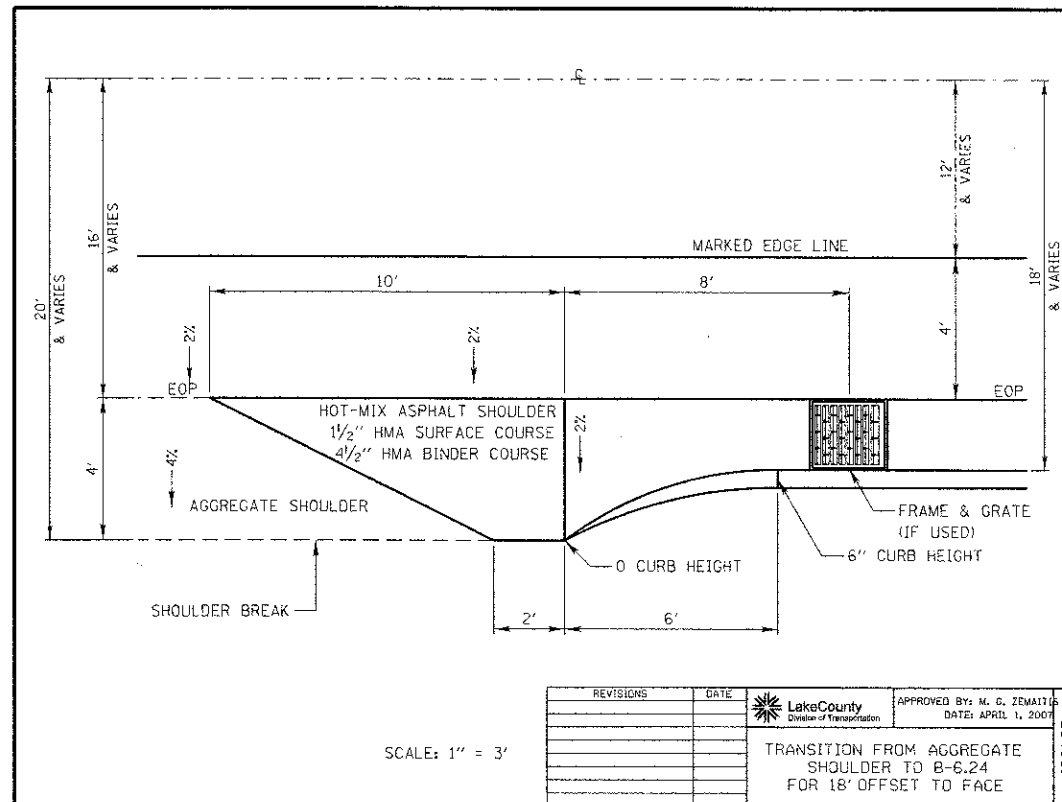
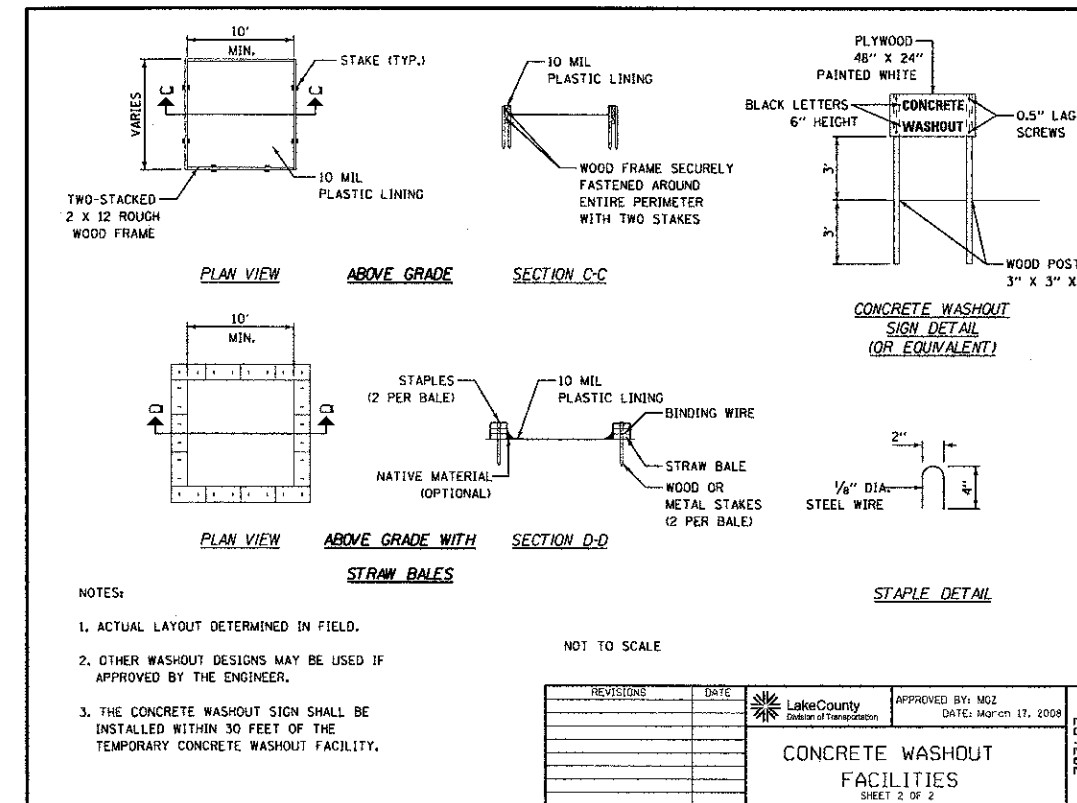
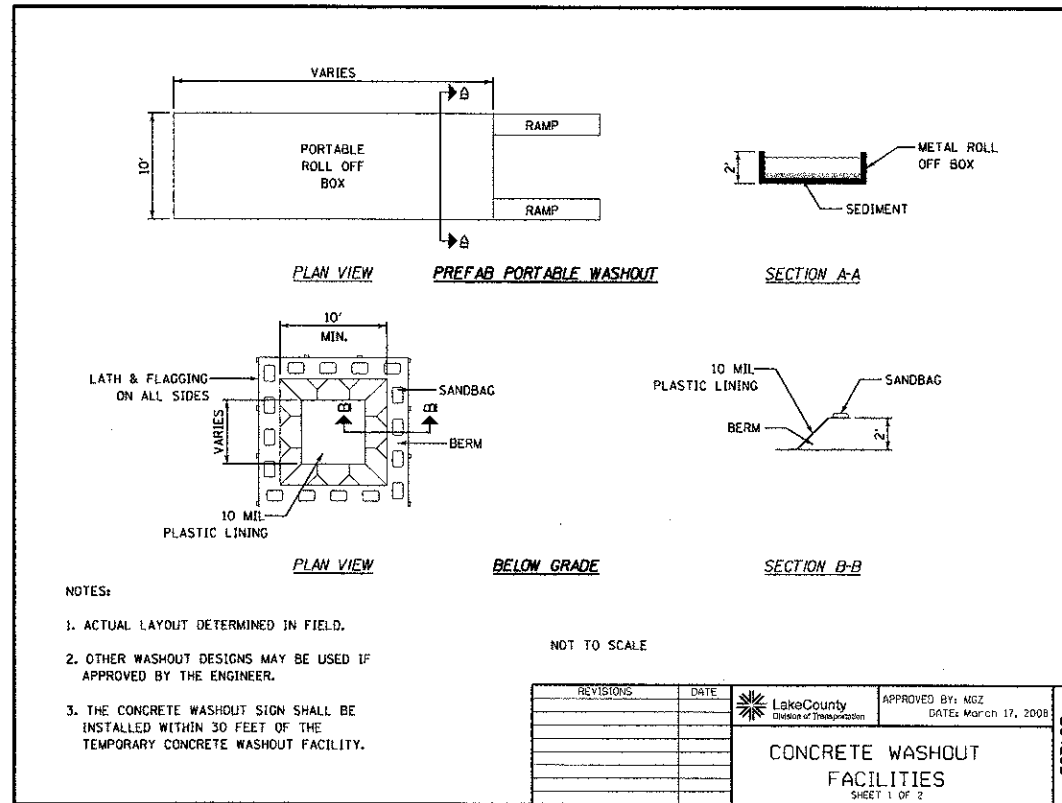
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**LAKE COUNTY DIVISION OF TRANSPORTATION DETAILS
 ROLLINS ROAD UNDERPASS**

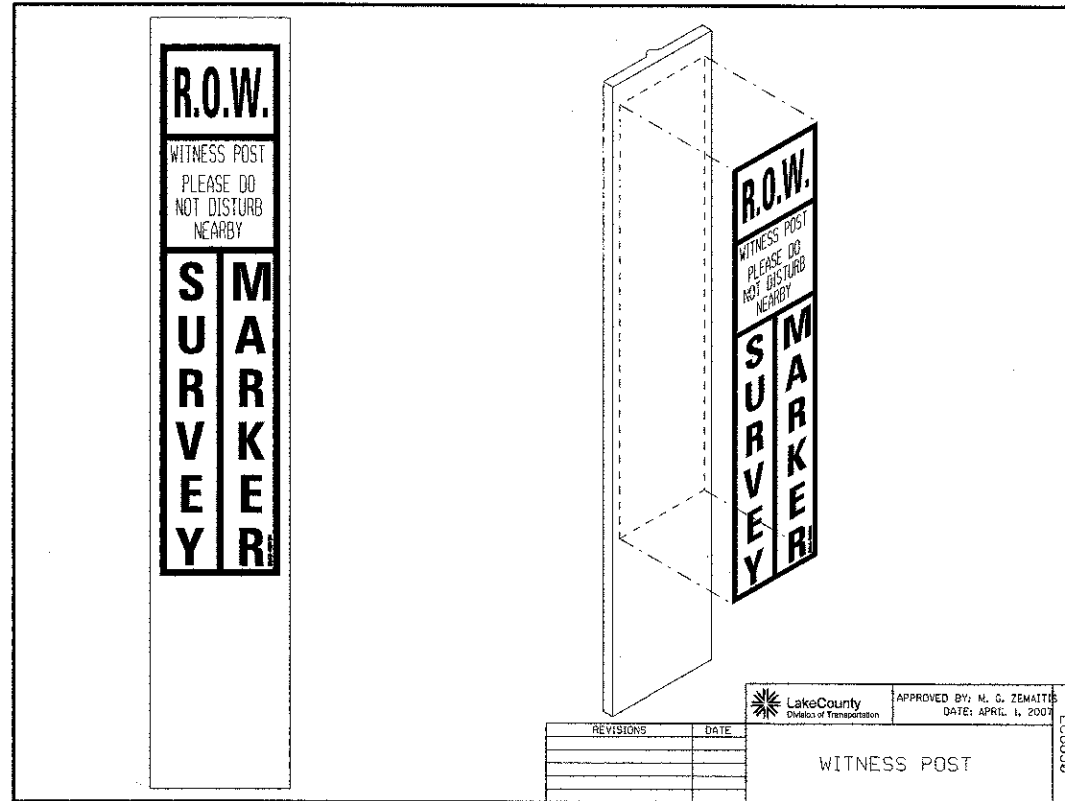
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BF	LAKE	118	71

CONTRACT NO. 63807
 FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT

SCALE: SHEET NO. OF SHEETS STA. TO STA.



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 CONSULTING ENGINEERS
 5507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60655
 Tel. 773.775.4005 Fax 773.775.4014

USER NAME = jk_willman	DESIGNED -	REVISED -
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PLOT DATE = 4/8/2013	CHECKED -	REVISED -
	DATE -	REVISED -

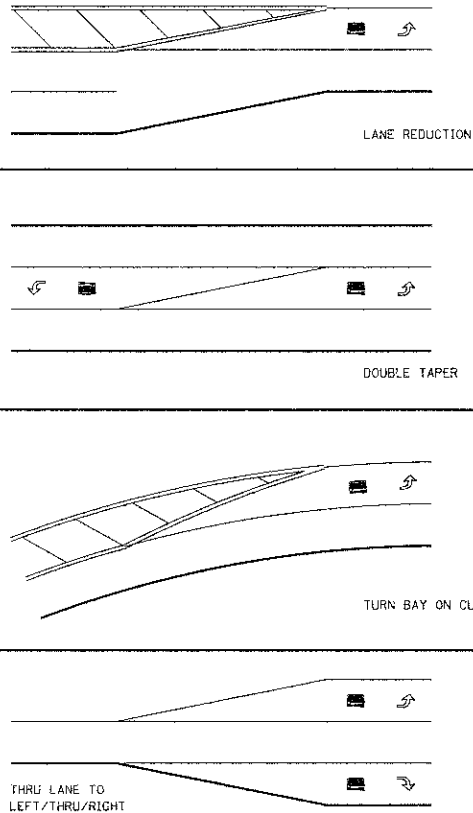
MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES

LAKE COUNTY DIVISION OF TRANSPORTATION DETAILS
ROLLINS ROAD UNDERPASS

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	73
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

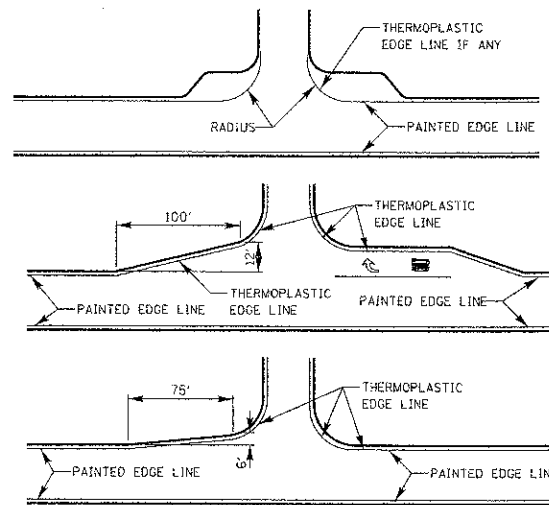
TYPICAL MINI-SKIP PAVEMENT MARKINGS



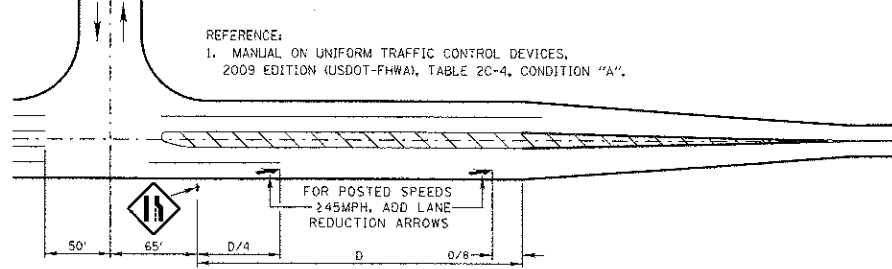
MINI-SKIPS ARE 2 FEET WHITE LINE WITH 6 FEET SPACING. THE MINI-SKIP IS THE SAME WIDTH AS THE PAVEMENT MARKING LINE, IT EXTENDS.

TYPICAL PAVEMENT MARKINGS

EDGE LINE RADII AT SIDE STREETS

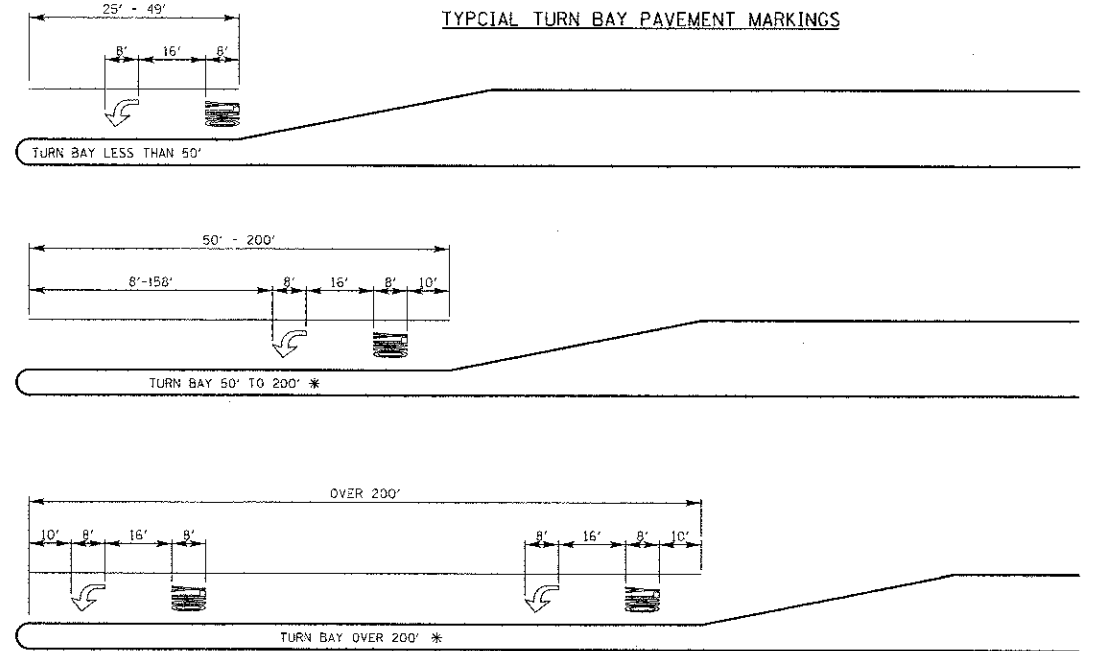


LANE REDUCTION ARROW PLACEMENT



DESIGN SPEED MPH	D (FEET)
<45	N/A
45	775' [1]
50	885' [1]
55	990' [1]

TYPICAL TURN BAY PAVEMENT MARKINGS

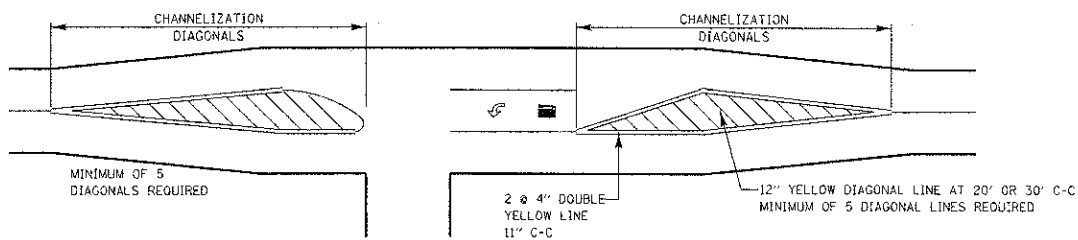


* AT INTERSECTIONS WITH VIDEO DETECTION, THE ARROW AND ONLY PAVEMENT MARKINGS SHALL BE A MINIMUM OF 30' BEHIND THE STOP BAR.

AREA = 15.6 SQ. FT.
AREA = 20.8 SQ. FT.

FULL SIZE LETTERS (8") AND ARROWS SHALL BE USED. TURN LANES IN EXCESS OF 400' IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW W/ "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW W/ "ONLY".

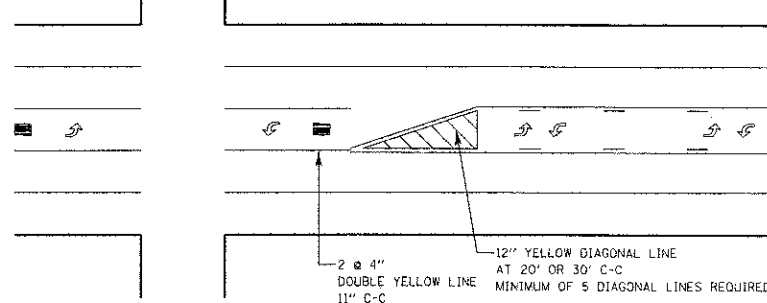
TWO LANE ROAD



TYPICAL DIAGONAL SPACING

SPEED LIMIT RANGE	DIAGONAL SPACING	
	CONTINUOUS	INTERSECTION CHANNELIZATION
30-45 MPH	75 FT.	20 FT.
OVER 45 MPH	150 FT.	30 FT.

TWO-WAY LEFT TO LEFT TURN BAY



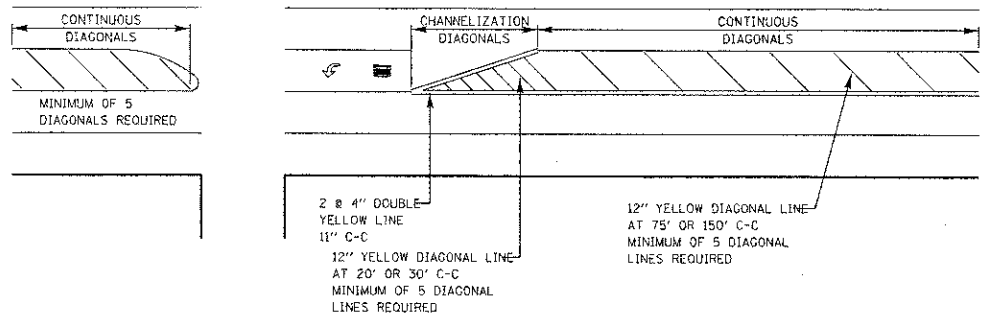
DUAL LEFT TURN ARROWS



A MINIMUM OF TWO PAIRS OF DUAL LEFT TURN ARROWS SHALL BE USED. THE DUAL LEFT TURN ARROWS SHALL BE WHITE IN COLOR. THE INTERVAL BETWEEN SETS OF DUAL LEFT TURN ARROWS SHOULD BE 200' AND 300'.

31.2 SQ. FT. MINIMUM OF 2 SETS REQUIRED

3 OR 5 LANE ROAD



REVISIONS	DATE
SEPARATED RAILROAD SHEET	06/02/08
ADDED LANE REDUCTION ARROWS	07/1/12

Lake County Division of Transportation
APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS
SHEET 1 OF 2

LC7800

NO.	DESCRIPTION	DATE	BY	SURVEYOR

Lake County Division of Transportation

PROJECT NAME	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
LAKE COUNTY STANDARDS & DETAILS					

FILE NAME: H:\PROJ\0020087\01\Rollins\Design\Details\CD01\0020087-01-Def-LCD0104.dgn

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CONSULTING ENGINEERS
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Tel. 773.775.4009 Fax 773.775.4014

USER NAME	DESIGNED	REVISD
amman	-	-
	DRAWN	REVISD
	CHECKED	REVISD
	DATE	REVISD
	4/8/2013	

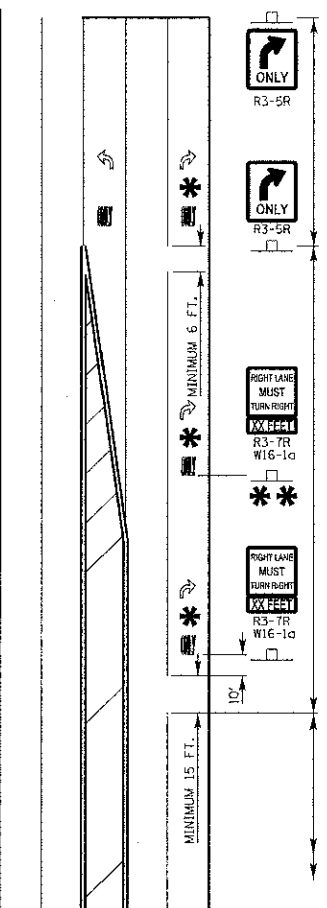
**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**LAKE COUNTY DIVISION OF TRANSPORTATION DETAILS
ROLLINS ROAD UNDERPASS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	74

CONTRACT NO. 63807
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT

THRU LANE TO
TURN LANE CONVERSION



TURN LANE
6" WHITE LINE
(ADDITIONAL PAVEMENT MARKINGS AS SHOWN
ON SHEET ONE OF THE L.C.D.O.T TYPICAL
PAVEMENT MARKINGS DETAIL SHEETS)

TRANSITION ZONE
6" WHITE 3'/12' SKIP DASH
LANE LINE

THRU LANE
4" WHITE 10'/30' SKIP DASH
LANE LINE

MINIMUM TRANSITION ZONE LENGTH

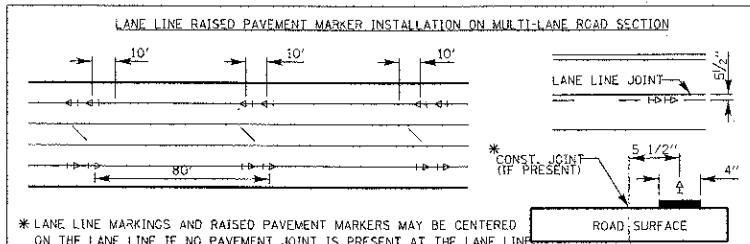
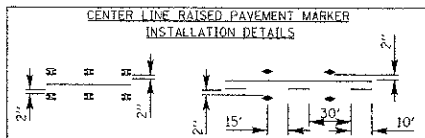
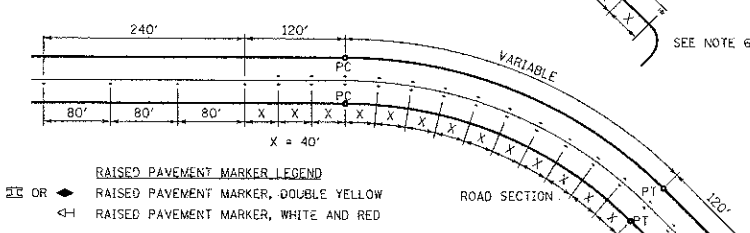
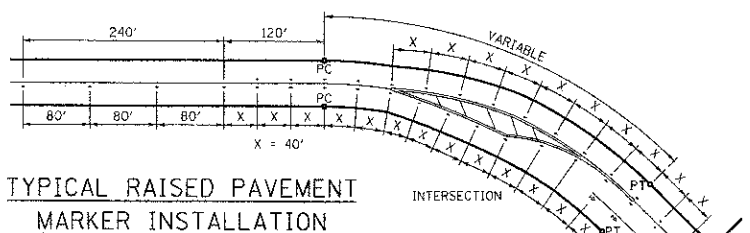
POSTED SPEED	LENGTH
25 M.P.H.	255 FT
30 M.P.H.	330 FT
35 M.P.H.	405 FT
40 M.P.H.	480 FT
45 M.P.H.	555 FT
50 M.P.H.	630 FT
55 M.P.H.	705 FT

LOCATION OF PAV'T MARKINGS
(MEASURED FROM BEGINNING OF TRANSITION ZONE)

POSTED SPEED	LOCATION OF PAV'T MARKINGS
25 M.P.H.	10 FT, 260 FT
30 M.P.H.	10 FT, 170 FT, 340 FT
35 M.P.H.	10 FT, 210 FT, 410 FT
40 M.P.H.	10 FT, 170 FT, 330 FT, 490 FT
45 M.P.H.	10 FT, 190 FT, 370 FT, 560 FT
50 M.P.H.	10 FT, 170 FT, 330 FT, 490 FT, 640 FT
55 M.P.H.	10 FT, 160 FT, 350 FT, 520 FT, 710 FT

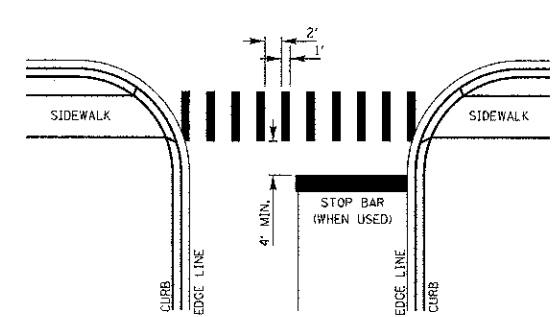
FOR POSTED SPEEDS 40 M.P.H. OR GREATER
A SECOND R3-7/W16-1a SIGN INSTALLATION
SHALL BE LOCATED HALFWAY BETWEEN THE
BEGINNING OF THE TRANSITION ZONE AND THE
BEGINNING OF THE TURN LANE

TYPICAL PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS



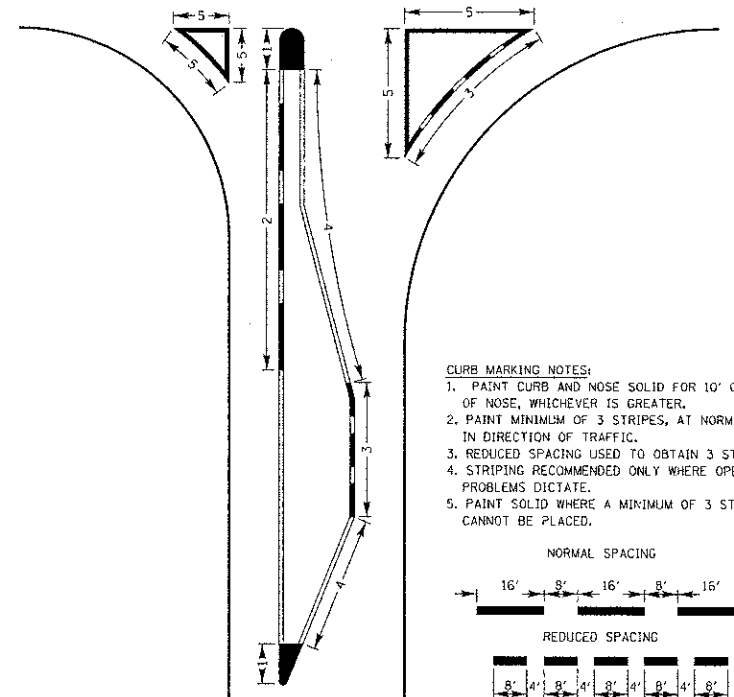
- RAISED PAVEMENT MARKER NOTES:**
- CENTERLINE RAISED PAVEMENT MARKERS (RPM'S) SHALL BE PLACED ON ALL TWO AND THREE LANE HIGHWAYS WITH CURVES OVER 3 1/2 DEGREES, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
 - SPACING = 40' FOR CENTERLINE MARKERS.
 - ALL RPM'S ON CENTERLINE ARE 2-WAY YELLOW. LANE LINE MARKERS ARE WHITE/RED.
 - MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH F.H.W.A. MEMORANDUM #10-21.
 - MARKERS SHALL BE FIELD ADJUSTED TO BE LOCATED IN CENTER OF THE 30' GAP OF A 30'/10' SKIP/DASH CENTERLINE.
 - RPM'S WHICH ARE TO BE LOCATED WITHIN THE INTERSECTION OF A CROSS STREET, SHALL NOT BE INSTALLED.
 - A MINIMUM OF 4 WHITE/RED MARKERS SHALL BE INSTALLED ALONG THE TURN LANE LINE.
 - RPM'S INSTALLED ON MULTI-LANE ROAD SECTIONS SHALL BE INSTALLED ON THE WHITE SKIP-DASH LANE LINE ONLY. THESE RPM'S SHALL BE INSTALLED IN PAIRS AND SHALL BE 80' CENTER TO CENTER. SPACING WITHIN EACH PAIR SHALL BE 10', CENTERED WITHIN THE 30' SKIP.

CROSSWALKS



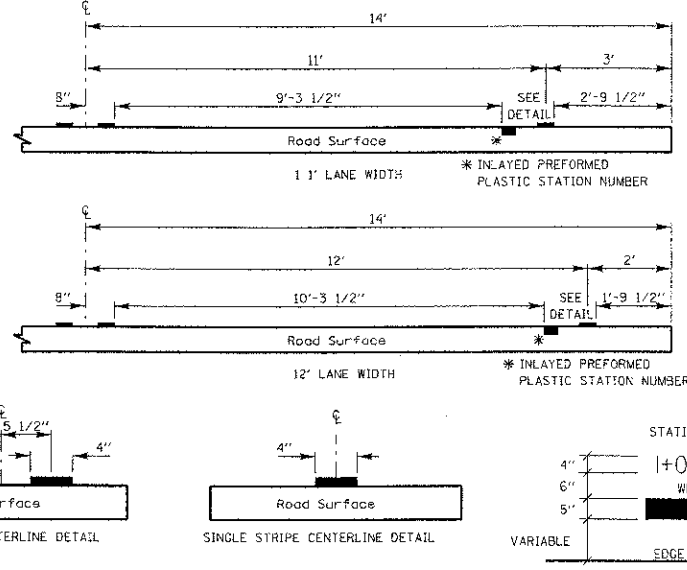
- CROSSWALK NOTES:**
- WIDTH OF THE CROSSWALK IS GENERALLY 6' EXCEPT AT SCHOOL CROSSINGS AND BICYCLE CROSSINGS, WHICH CAN BE 8'.
 - THE STOP BAR SHOULD BE INSTALLED A MINIMUM OF 4' IN ADVANCE OF THE CROSSWALK.

CURB MARKING



- CURB MARKING NOTES:**
- PAINT CURB AND NOSE SOLID FOR 10' OR RADIUS OF NOSE, WHICHEVER IS GREATER.
 - PAINT MINIMUM OF 3 STRIPES, AT NORMAL SPACING, IN DIRECTION OF TRAFFIC.
 - REDUCED SPACING USED TO OBTAIN 3 STRIPE MINIMUM.
 - STRIPING RECOMMENDED ONLY WHERE OPERATIONAL PROBLEMS DICTATE.
 - PAINT SOLID WHERE A MINIMUM OF 3 STRIPES CANNOT BE PLACED.

PAVEMENT CROSS SECTION SHOWING TYPICAL PAVEMENT MARKINGS (2-LANE ROADWAY)



TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE OF 2 LANE PAVEMENT	4 IN.	SKIP-DASH	YELLOW	10 FT. LINE WITH 30 FT. SPACE
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 IN. 2 @ 4 IN.	SOLID SOLID	YELLOW YELLOW	5 1/2 IN. C-C FROM SKIP-DASH CENTERLINE 1 1/2 IN. C-C (OMIT SKIP-DASH CENTERLINE BETWEEN)
CENTERLINE ON MULTI-LANE UNDIVIDED LANE LINES	2 @ 4 IN.	SOLID	YELLOW	1 1/2 IN. C-C
LANE LINES	4 IN.	SKIP-DASH	WHITE	10 FT. LINE WITH 30 FT. SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2 FT. LINE WITH 6 FT. SPACE
EDGE LINES	5 IN. WHITE 4 IN. YELLOW	SOLID	WHITE - RIGHT YELLOW - LEFT	OUTLINE RAISED MEDIANS IN YELLOW
TURN LANE MARKINGS	6 IN. LINE FULL SIZE LETTERS AND SYMBOLS (8 FT.)	SOLID	WHITE	TURN ARROW 15.6 SQ. FT. STRAIGHT ARROW 1.5 SQ. FT. ONLY 20.8 SQ. FT. COMB. ARROW 26.0 SQ. FT.
TWO WAY LEFT TURN MARKINGS	2 @ 4 IN. EACH DIRECTION 8 FT. LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10 FT. LINE WITH 30 FT. SPACE FOR SKIP-DASH 5 1/2 IN. C-C BETWEEN SKIP-DASH LINE AND SOLID LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK	12 IN. @ 90°	SOLID	WHITE	12 IN. LONGITUDINAL BAR WITH 24 IN. SPACE 6 FT. TO 12 FT. WIDE SEE TYPICAL CROSSWALK MARKING DETAIL
STOP BARS	24 IN.	SOLID	WHITE	PLACE 4 FT. IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE PLACE AT DESIRED STOPPING POINT.
PAINTED MEDIANS	2 @ 4 IN. & 11 IN. C-C 12 IN. DIAGONALS @ 45° NO DIAGONALS USED FOR 4 FT. WIDE MEDIAN	SOLID	YELLOW: 2-WAY TRAFFIC WHITE: 1-WAY TRAFFIC	1 1/2 IN. C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING DETAIL MINIMUM OF 5 DIAGONALS
CORE MARKING AND CHANNELIZING LINES	8 IN. WITH 12 IN. DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS 15 FT. C-C (LESS THAN 30 M.P.H.) 20 FT. C-C (30 TO 45 M.P.H.) 30 FT. C-C (OVER 45 M.P.H.) MINIMUM OF 5 DIAGONALS
R.R. CROSSING	24 IN. TRANSVERSE LINES RR IS 6 FT. LETTER 16 IN. LINE FOR "X"	SOLID	WHITE	SEE I.D.O.T. STD. 780001 SQ. FT. AREA OF: "R" = 3.6 SQ. FT. / "X" = 64.0 SQ. FT.
SHOULDER DIAGONALS	12 IN. @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50 FT. C-C (LESS THAN 30 M.P.H.) 75 FT. C-C (30 TO 45 M.P.H.) 150 FT. C-C (OVER 45 M.P.H.) MINIMUM OF 5 DIAGONALS

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO PART III "MARKINGS" IN THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AND THE LATEST I.D.O.T. HIGHWAY STANDARD 780001.

REVISIONS	DATE	APPROVED BY:
SEPARATED RAILROAD SHEET	06/02/08	A. KHAWAJA
REVISED RPM DETAILS	07/1/12	DATE: APRIL 1, 2007



TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS SHEET 2 OF 2

LC7800

NO.	DESCRIPTION	DATE	BY	SURVEYOR



PROJECT NAME	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
LAKE COUNTY STANDARDS & DETAILS					

FILE NAME = N:\PROJ\0020087\01\Rollins\Design\Details\CD01\0020087-01-DET-LCD0105.dgn



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Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

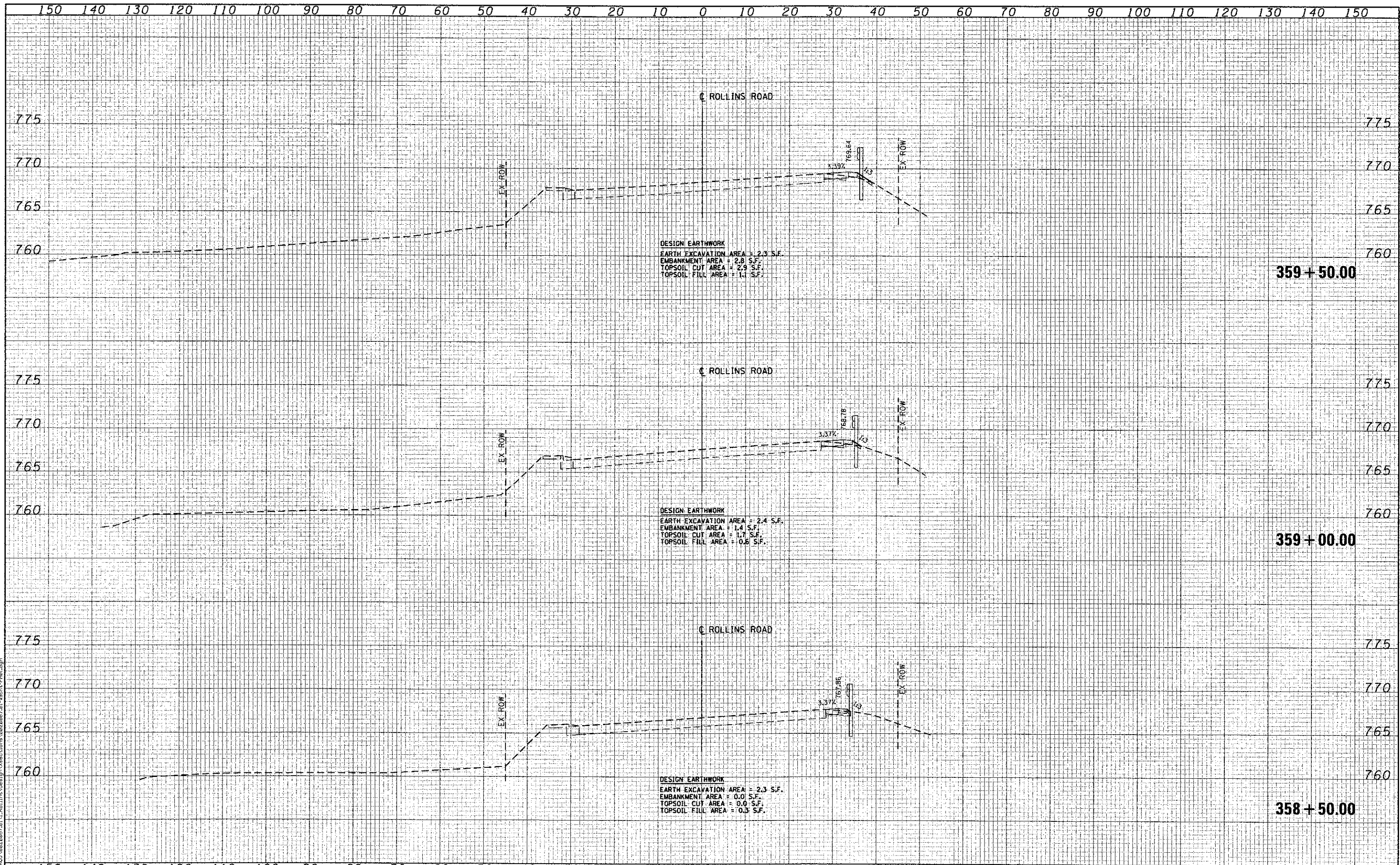
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jkjellman	-	-
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MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES

LAKE COUNTY DIVISION OF TRANSPORTATION DETAILS
ROLLINS ROAD UNDERPASS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	75

CONTRACT NO. 63807



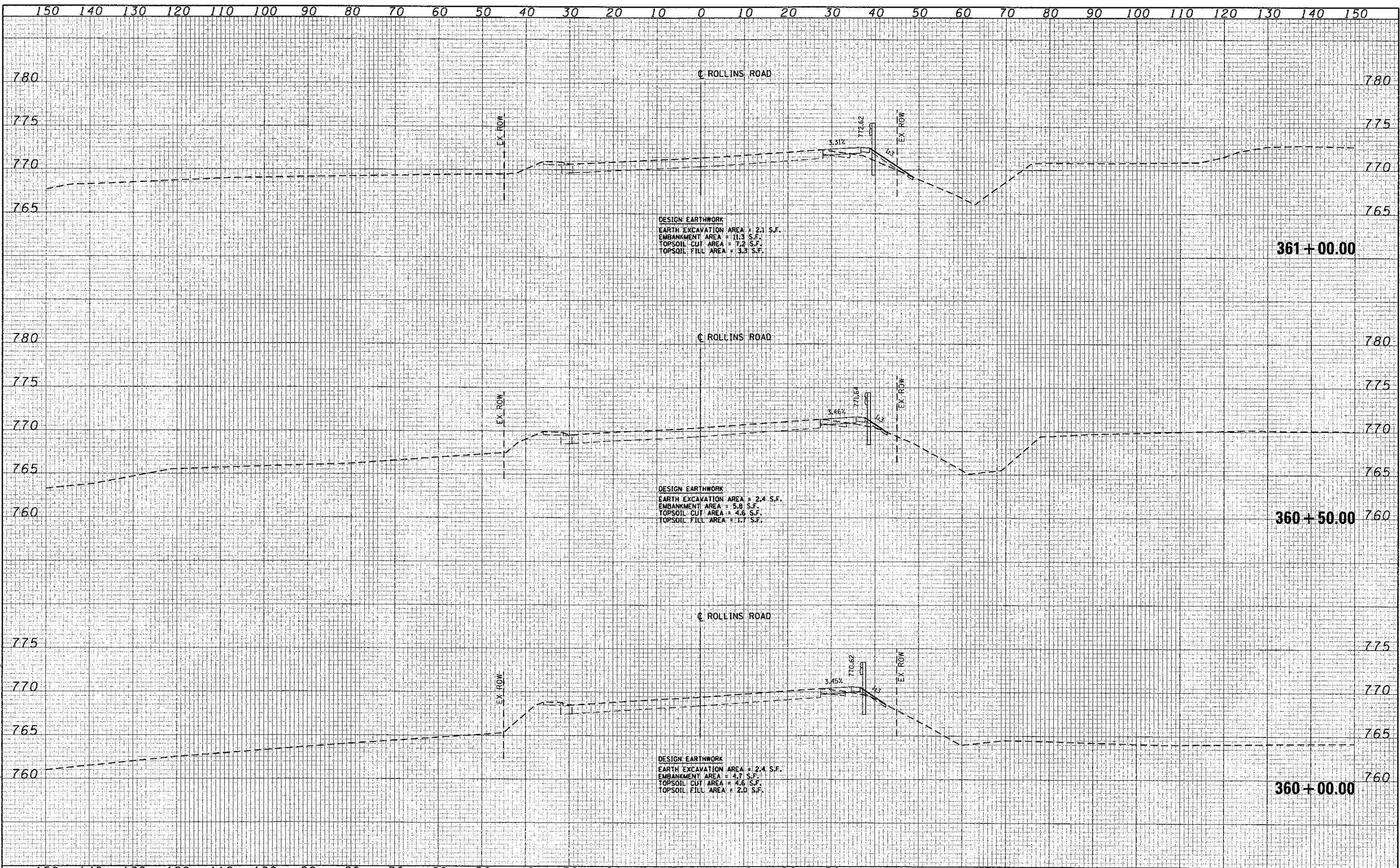
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DRAWN - NT	REVISOR -	
CHECKED - MJL	REVISOR -	
DATE - 4/8/2013	REVISOR -	

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - PRE-STAGE
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 358+50.00 TO STA. 359+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	76
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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PLOT SCALE = 20,000' / 1" = 1"	DRAWN - NT	REVISED -
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	DATE - 4/8/2013	REVISED -

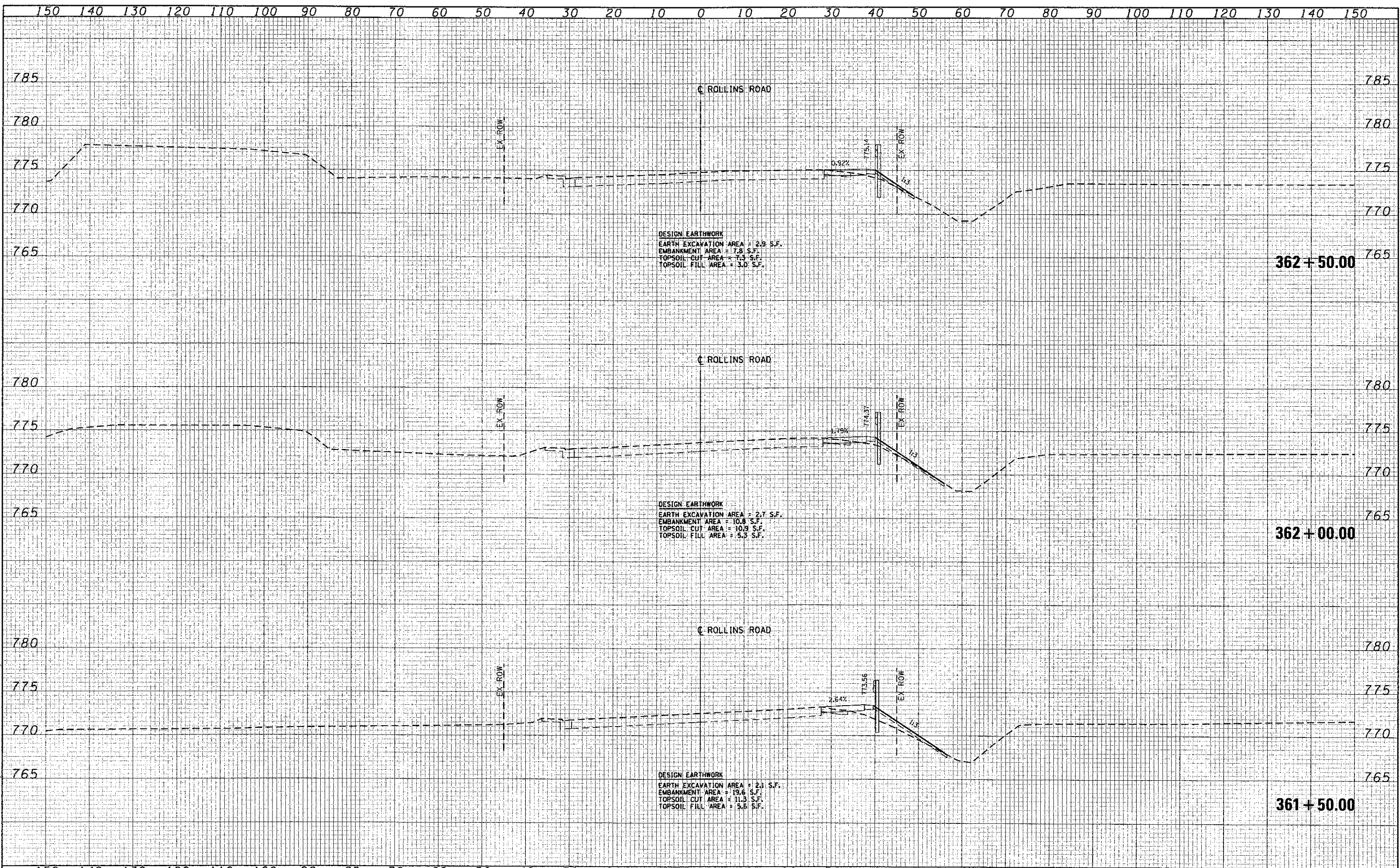
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - PRE-STAGE
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 360+00.00 TO STA. 361+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	77
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

CONTRACT NO. 63807



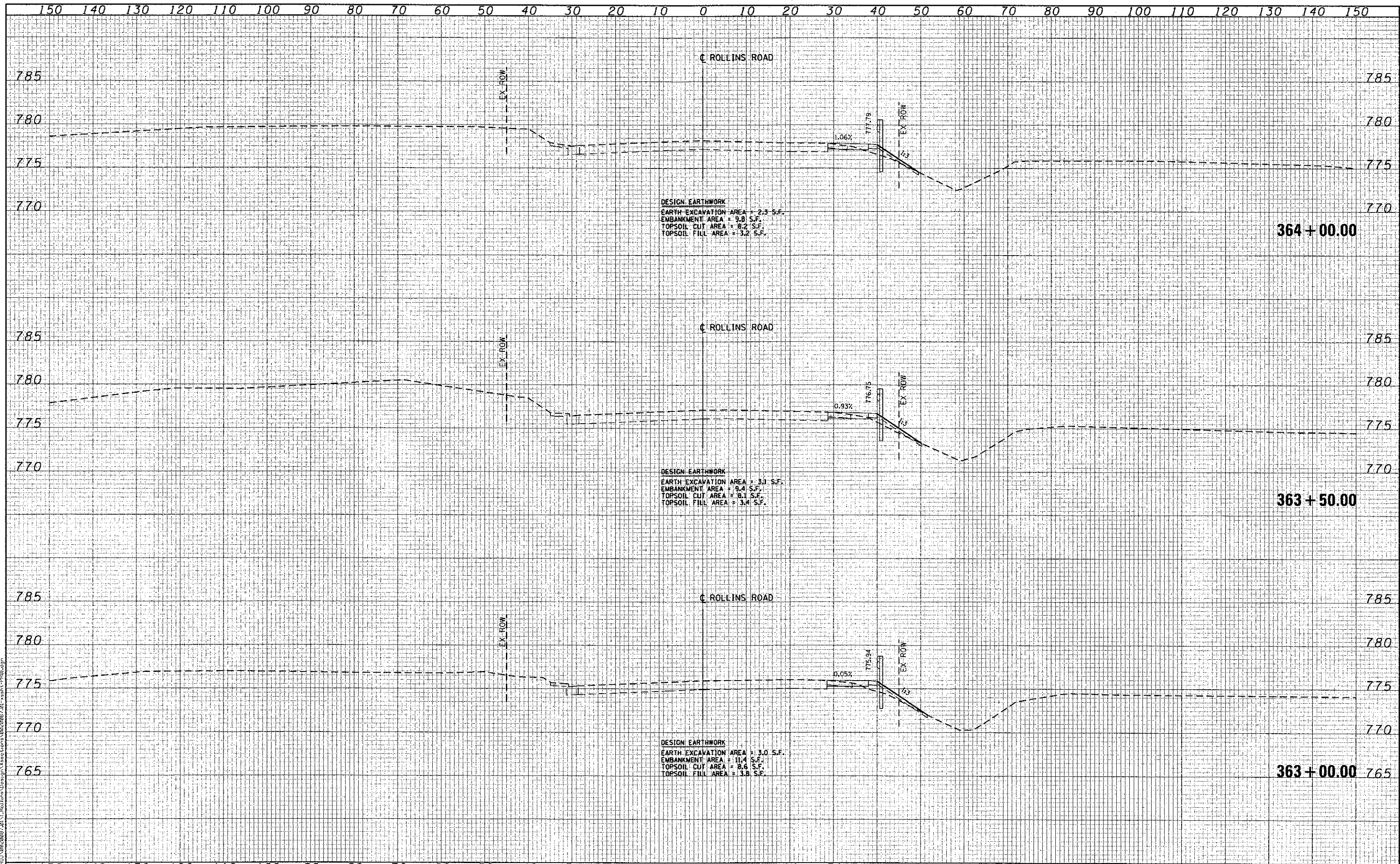
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	DATE - 4/8/2013	REVISED -

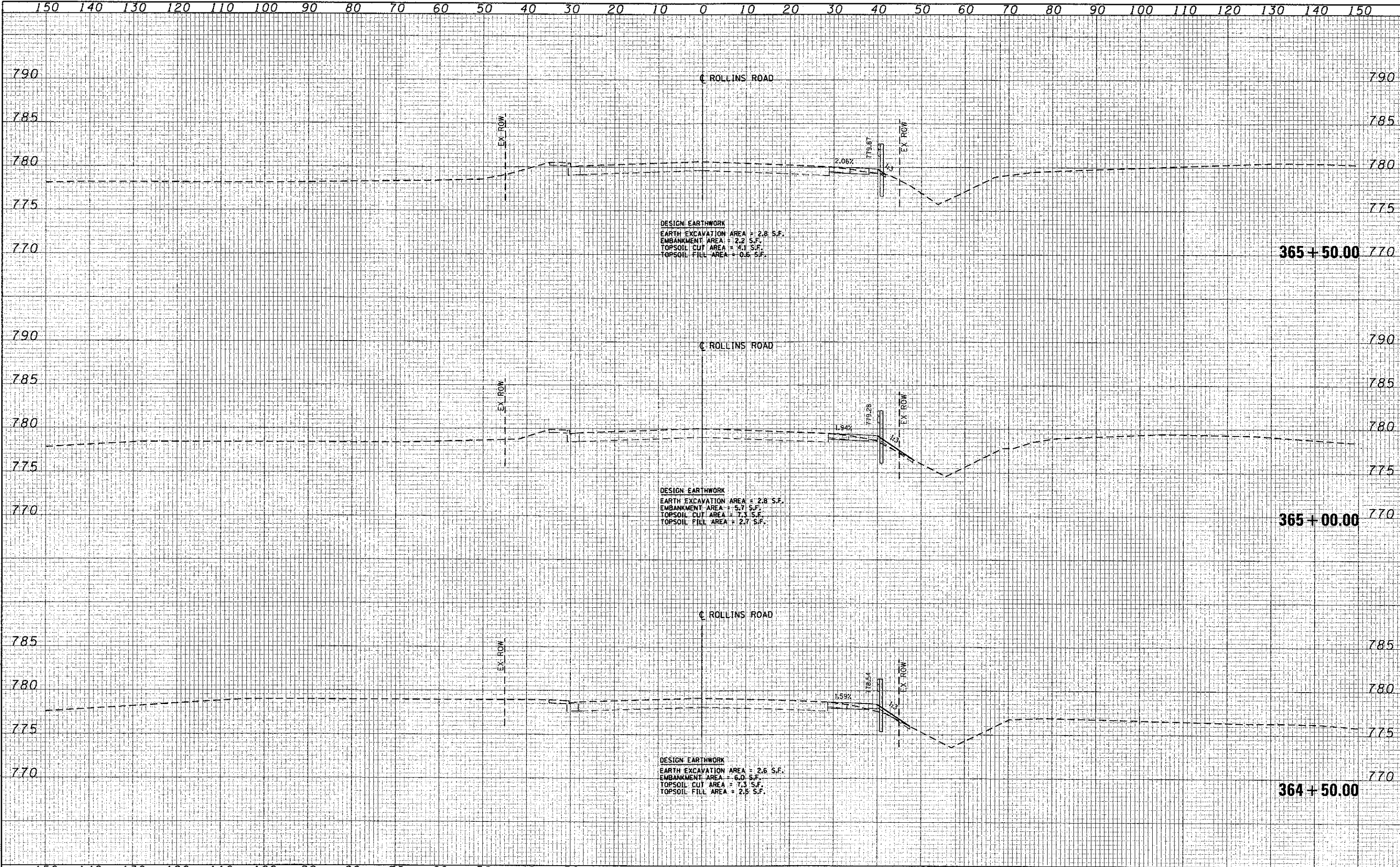
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - PRE-STAGE
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 361+50.00 TO STA. 362+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-5T	LAKE	118	78
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				





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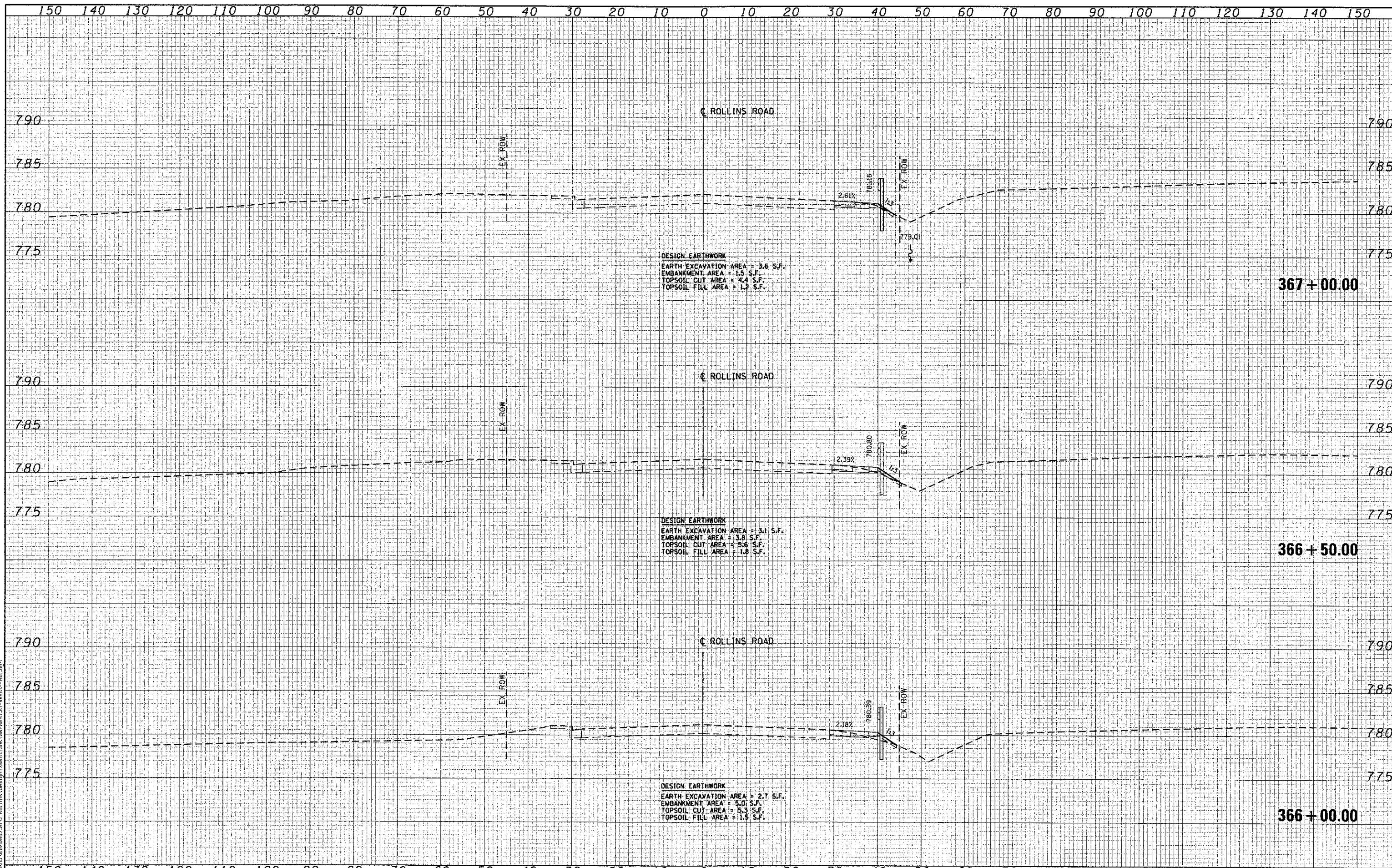
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PLOT DATE = 4/8/2013	CHECKED - MJL	REVISED -
DATE = 4/8/2013	REVISIONS -	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

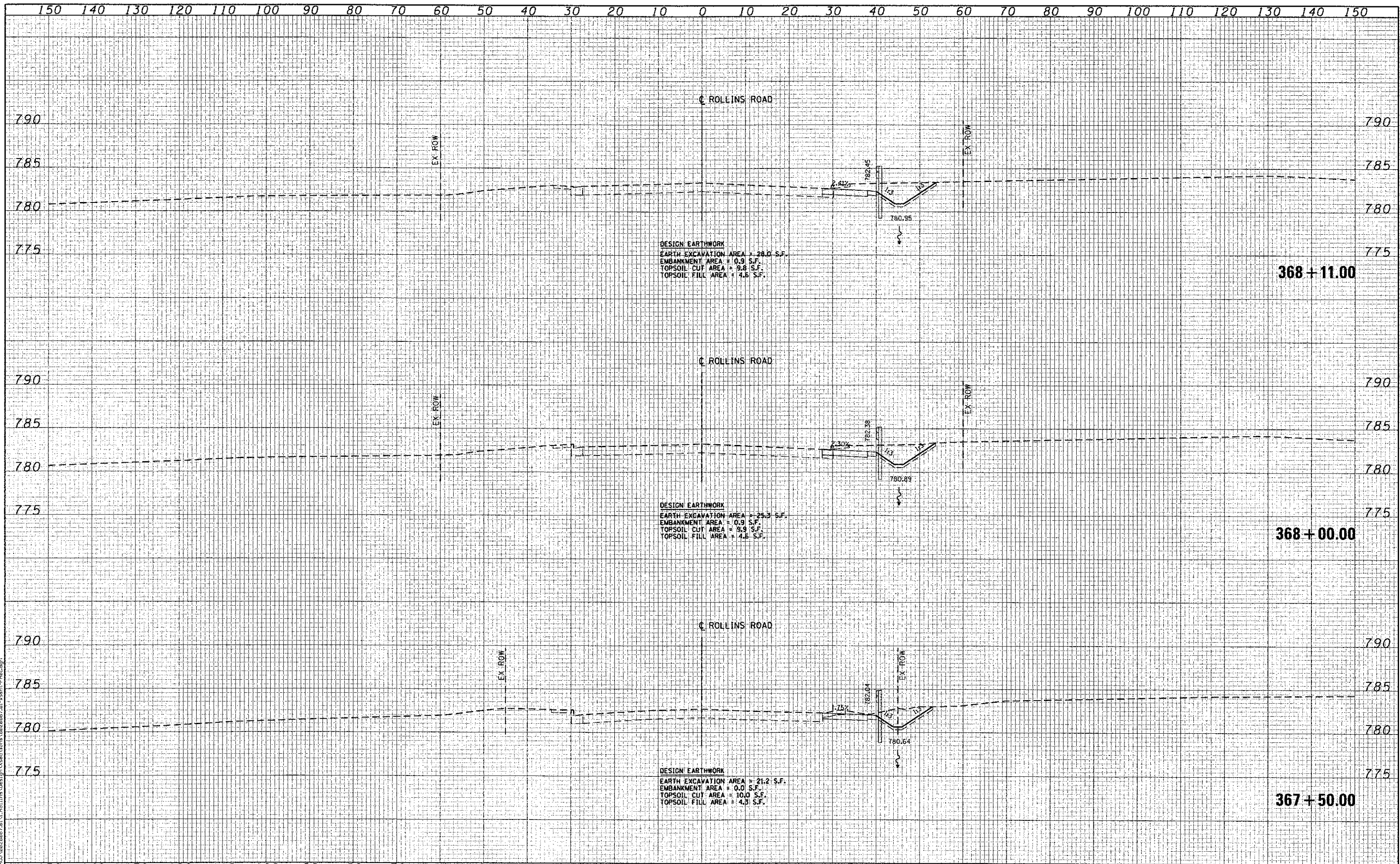
**CROSS SECTIONS
 ROLLINS ROAD - PRE-STAGE
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 364+50.00 TO STA. 365+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	80
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				CONTRACT NO. 63807



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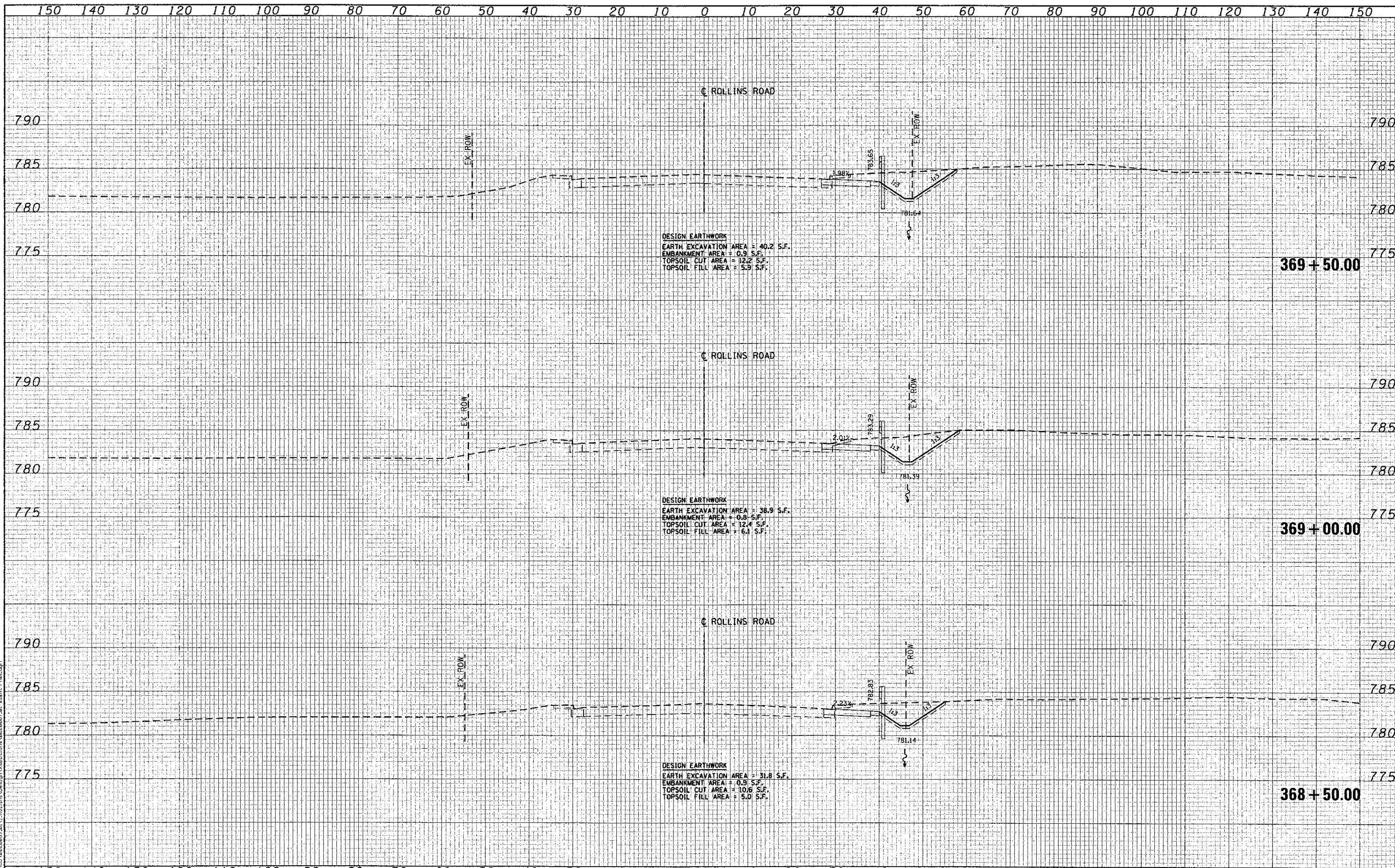
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PLOT DATE = 4/8/2013	CHECKED - MJL	REVISED -
	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

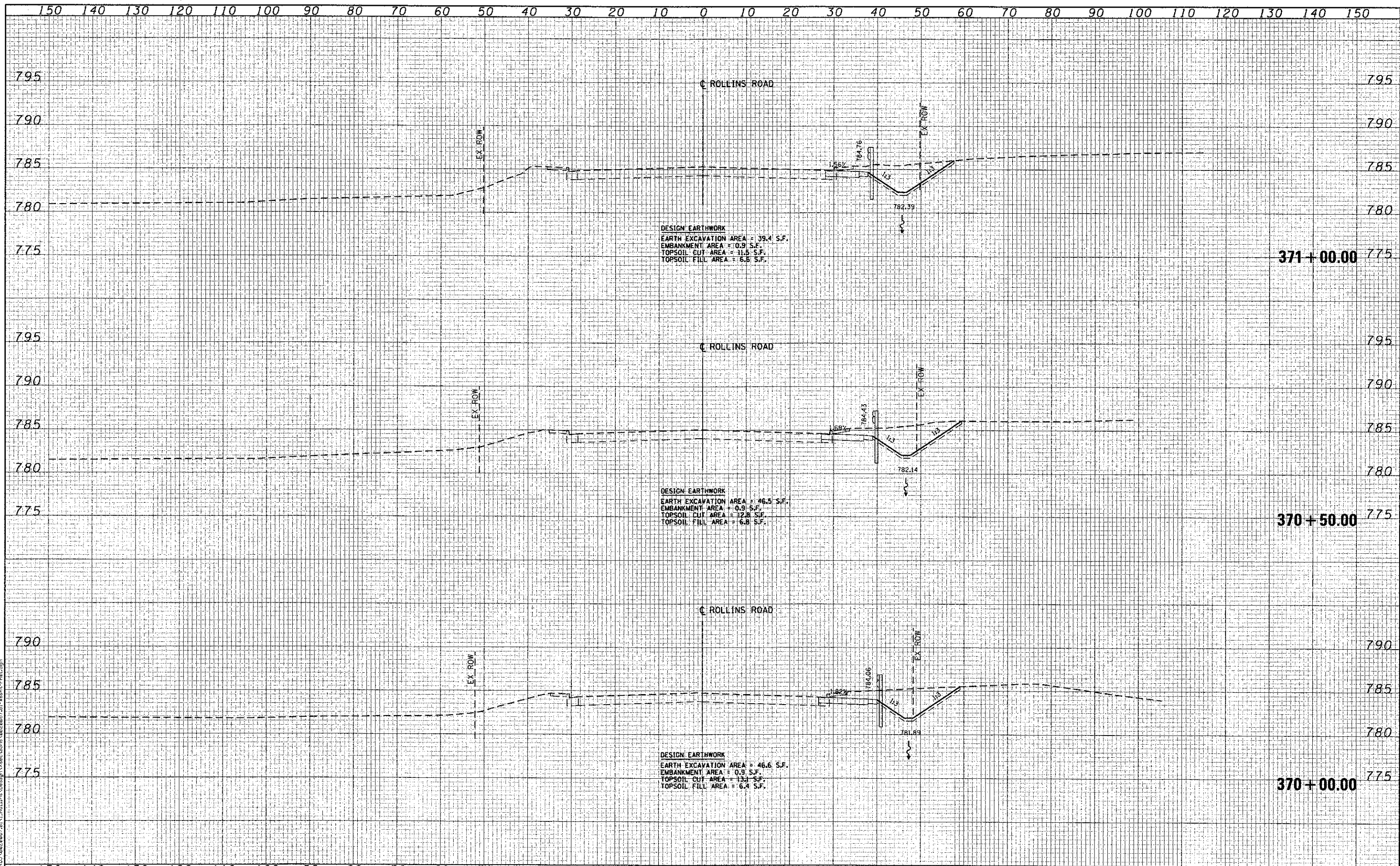
**CROSS SECTIONS
 ROLLINS ROAD - PRE-STAGE
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 367+50.00 TO STA. 368+11.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	82
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	



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CC Ciorba Group, Inc.
 CONSULTING ENGINEERS
 8507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60656
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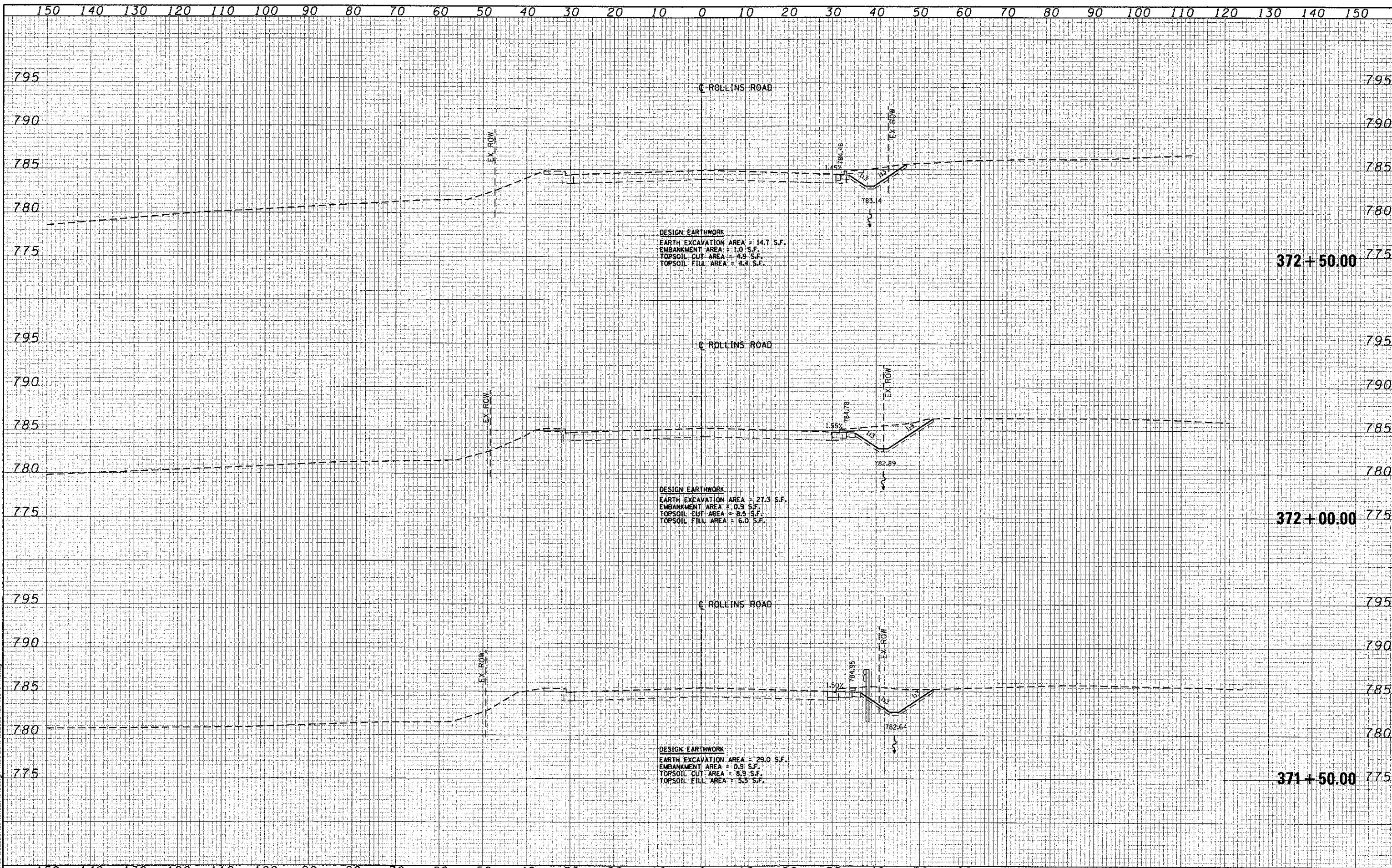
USER NAME = jkhalilman	DESIGNED - NT	REVISED -
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**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

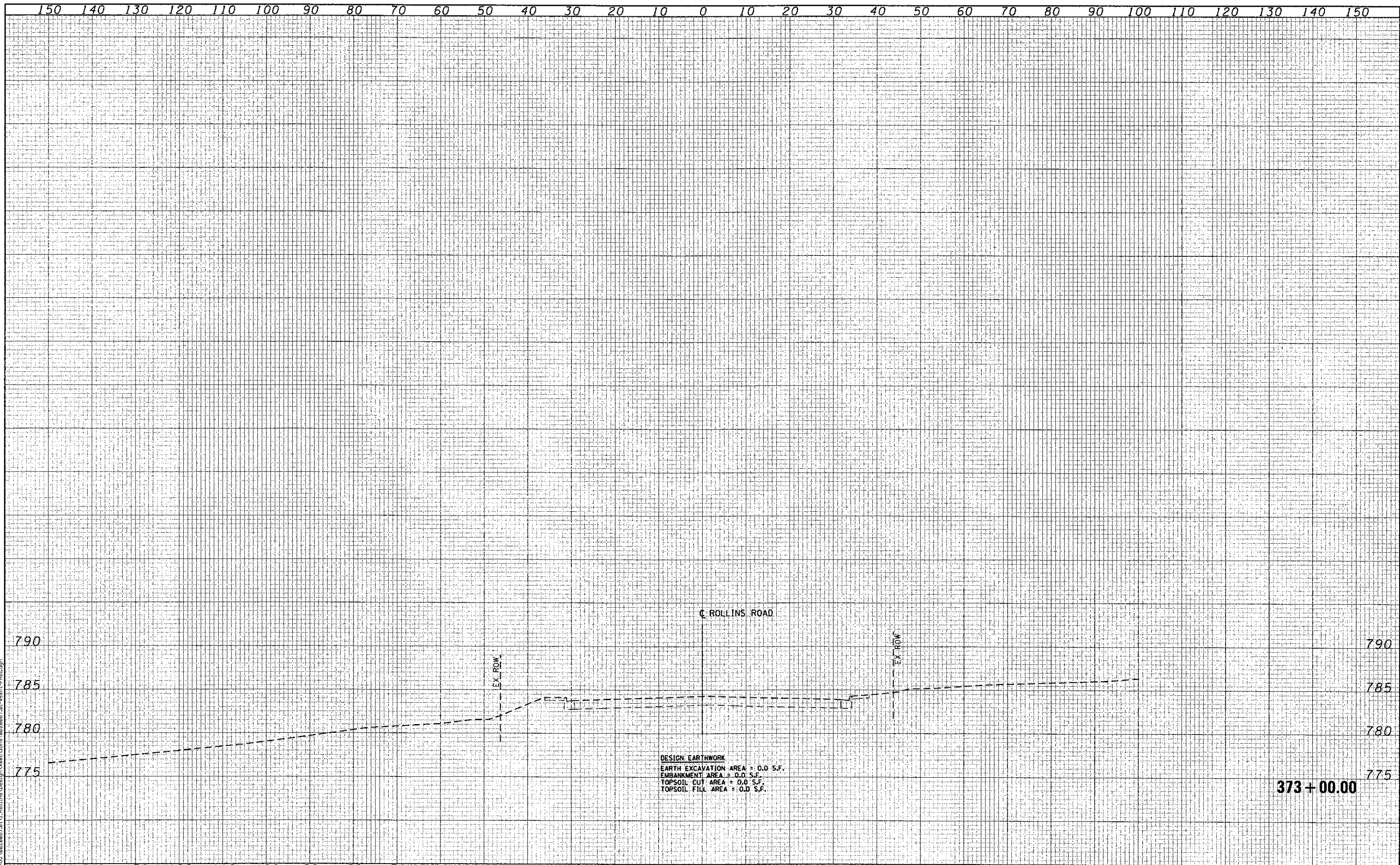
**CROSS SECTIONS
 ROLLINS ROAD - PRE-STAGE
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 370+00.00 TO STA. 371+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	84
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

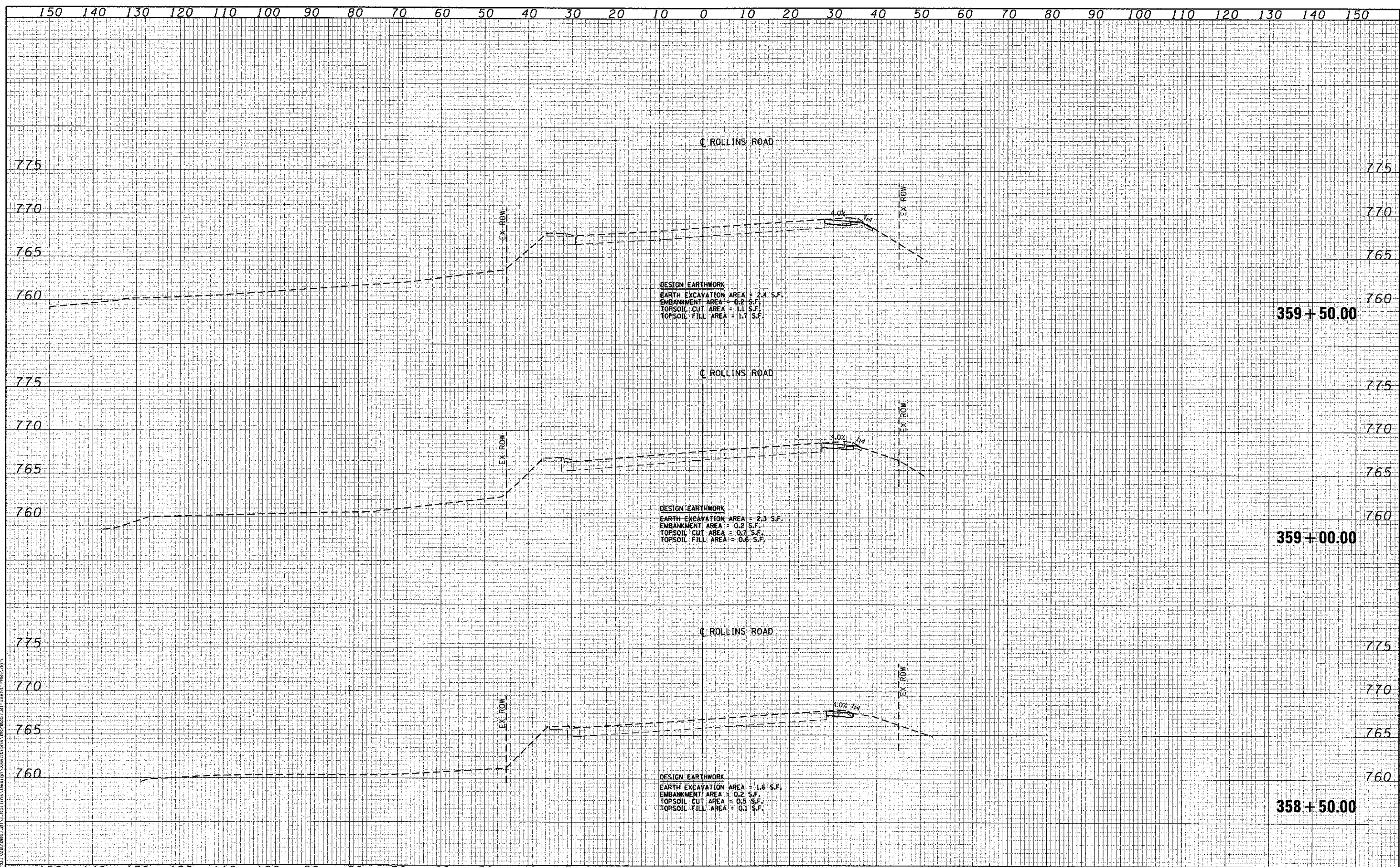


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	Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4003 Fax 773.775.4014	USER NAME = jk_jellman PLOT SCALE = 20.0000' / 1" = PLOT DATE = 4/8/2013	DESIGNED - NT DRAWN - NT CHECKED - MJL DATE - 4/8/2013	REVISED - REVISED - REVISED - REVISED -	MILLENNIUM TRAIL LAKE COUNTY FOREST PRESERVES	CROSS SECTIONS ROLLINS ROAD - PRE-STAGE ROLLINS ROAD UNDERPASS	SCALE: SHEET NO. OF SHEETS STA. 373+00.00 TO STA. 373+50.00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>F.A.U. RTE.</th> <th>SECTION</th> <th>COUNTY</th> <th>TOTAL SHEETS</th> <th>SHEET NO.</th> </tr> <tr> <td>181</td> <td>12-F3000-01-BT</td> <td>LAKE</td> <td>118</td> <td>86</td> </tr> </table>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	181	12-F3000-01-BT	LAKE	118	86
	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.													
181	12-F3000-01-BT	LAKE	118	86														
CONTRACT NO. 63807 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT																		



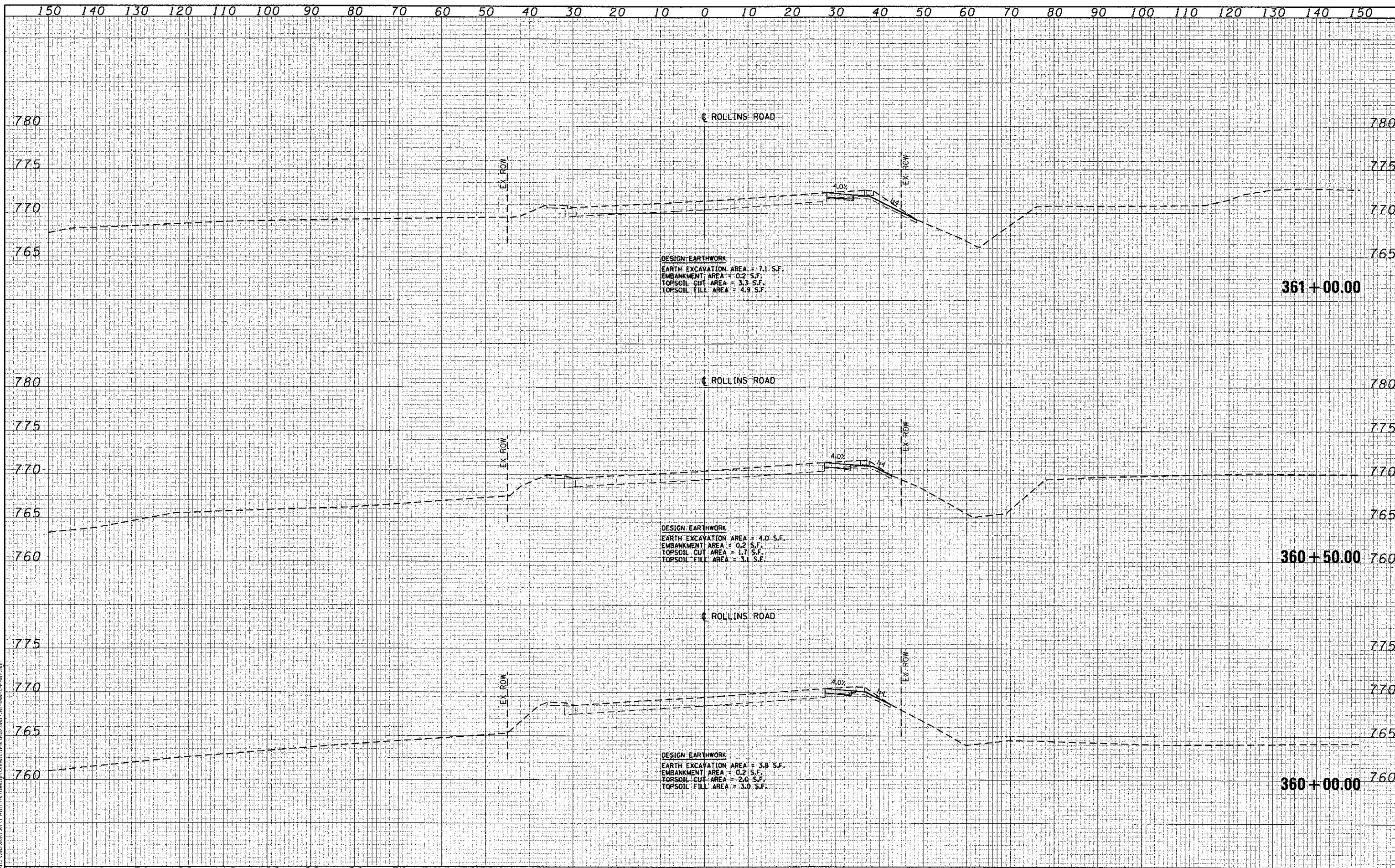
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PLOT DATE = 4/8/2013	CHECKED - MJL	REVISED -
	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 358+50.00 TO STA. 359+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	87
CONTRACT NO. 63807				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



USER NAME = m.j.l.	DESIGNED - NT	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - NT	REVISED -
PLOT DATE = 4/8/2013	CHECKED - MJL	REVISED -
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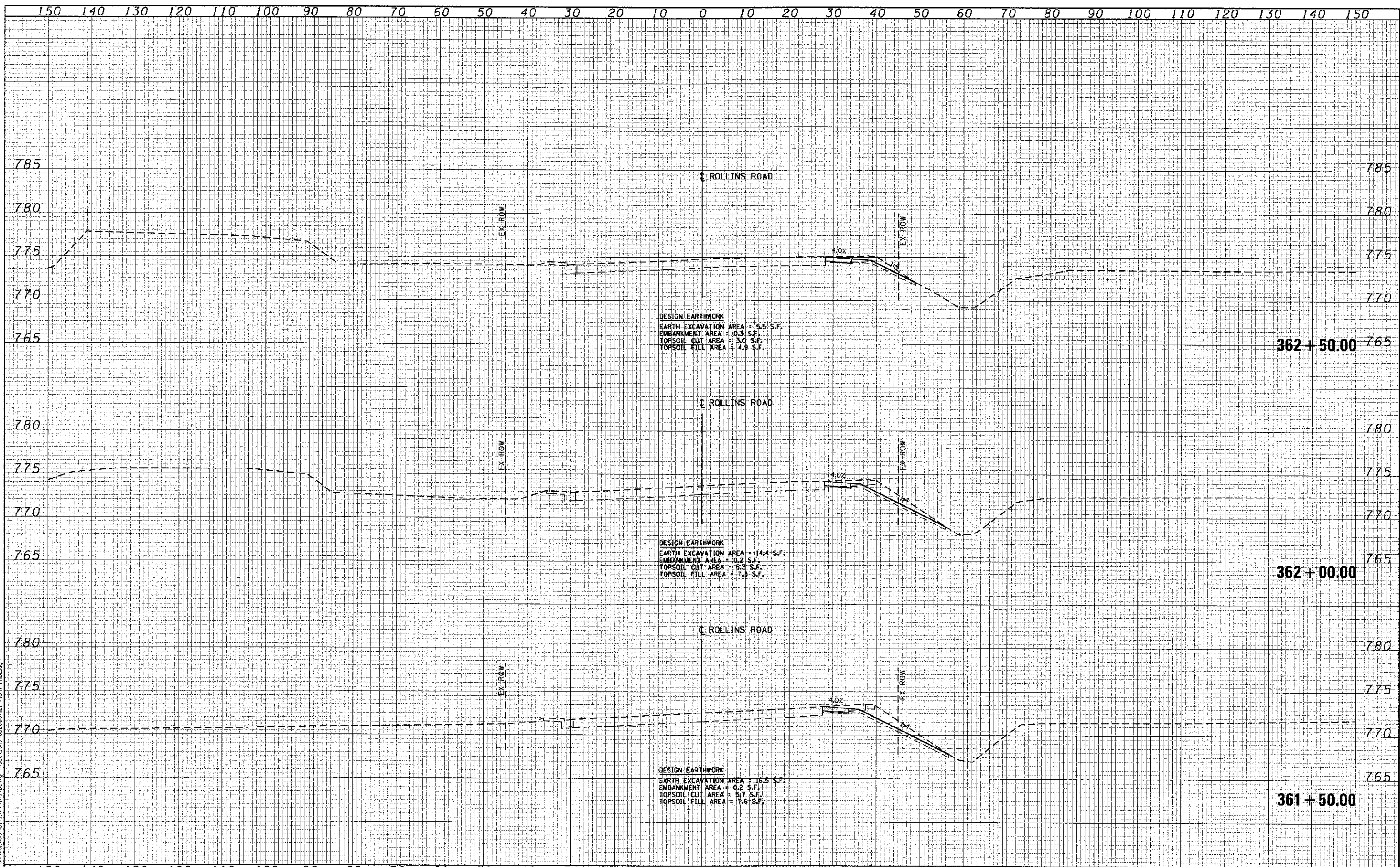
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 360+00.00 TO STA. 361+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	88
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 63807	

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DRAWN - NT	REVISED -	
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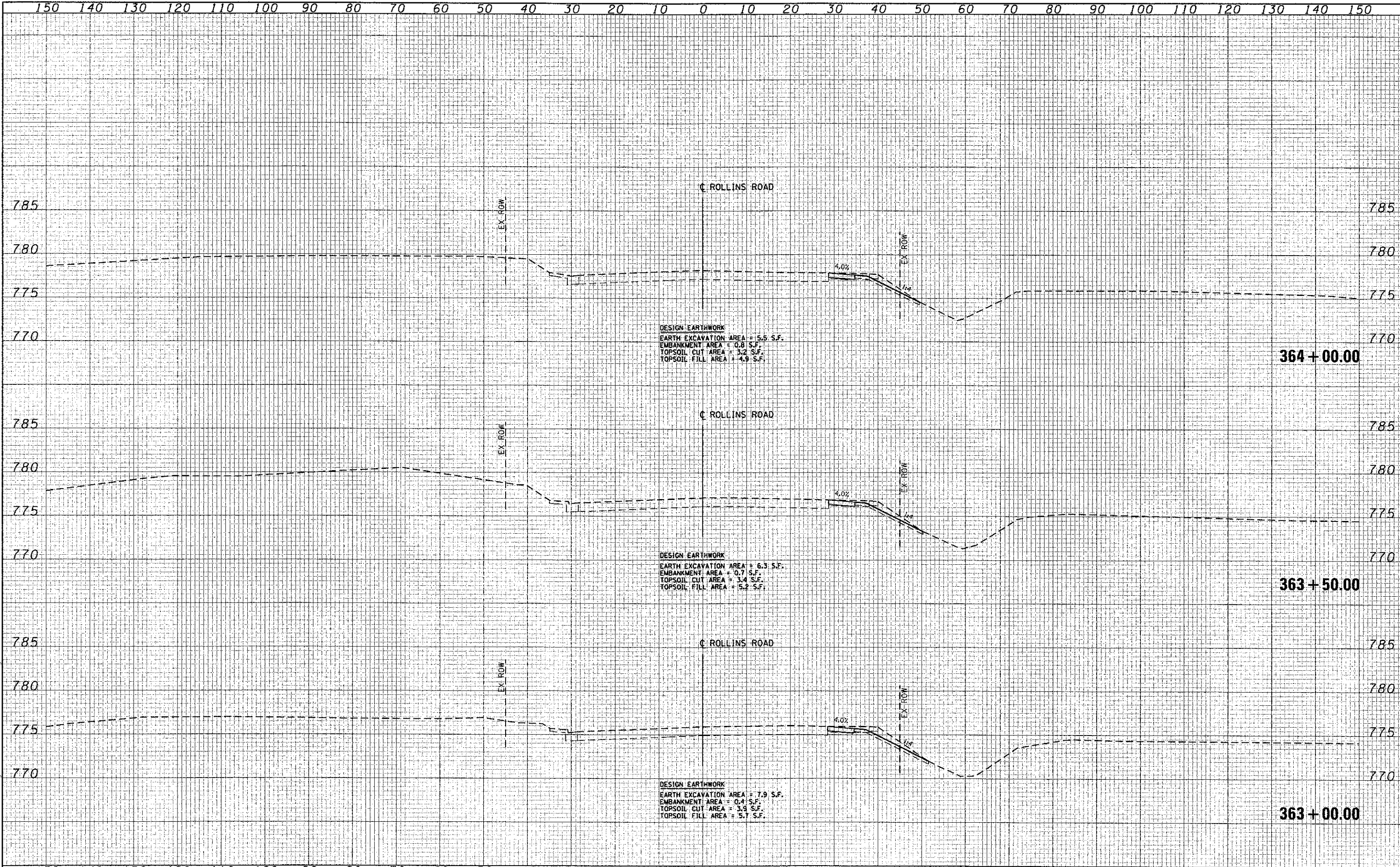
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 361+50.00 TO STA. 362+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	89
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

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Ciorba Group, Inc.
 CONSULTING ENGINEERS
 9507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60656
 Tel. 773.775.4009 Fax 773.775.4014

USER NAME = jk.jelmon	DESIGNED - NT	REVISED -
DRAWN - NT	REVISIED -	
CHECKED - MJL	REVISIED -	
DATE - 4/8/2013	REVISIED -	

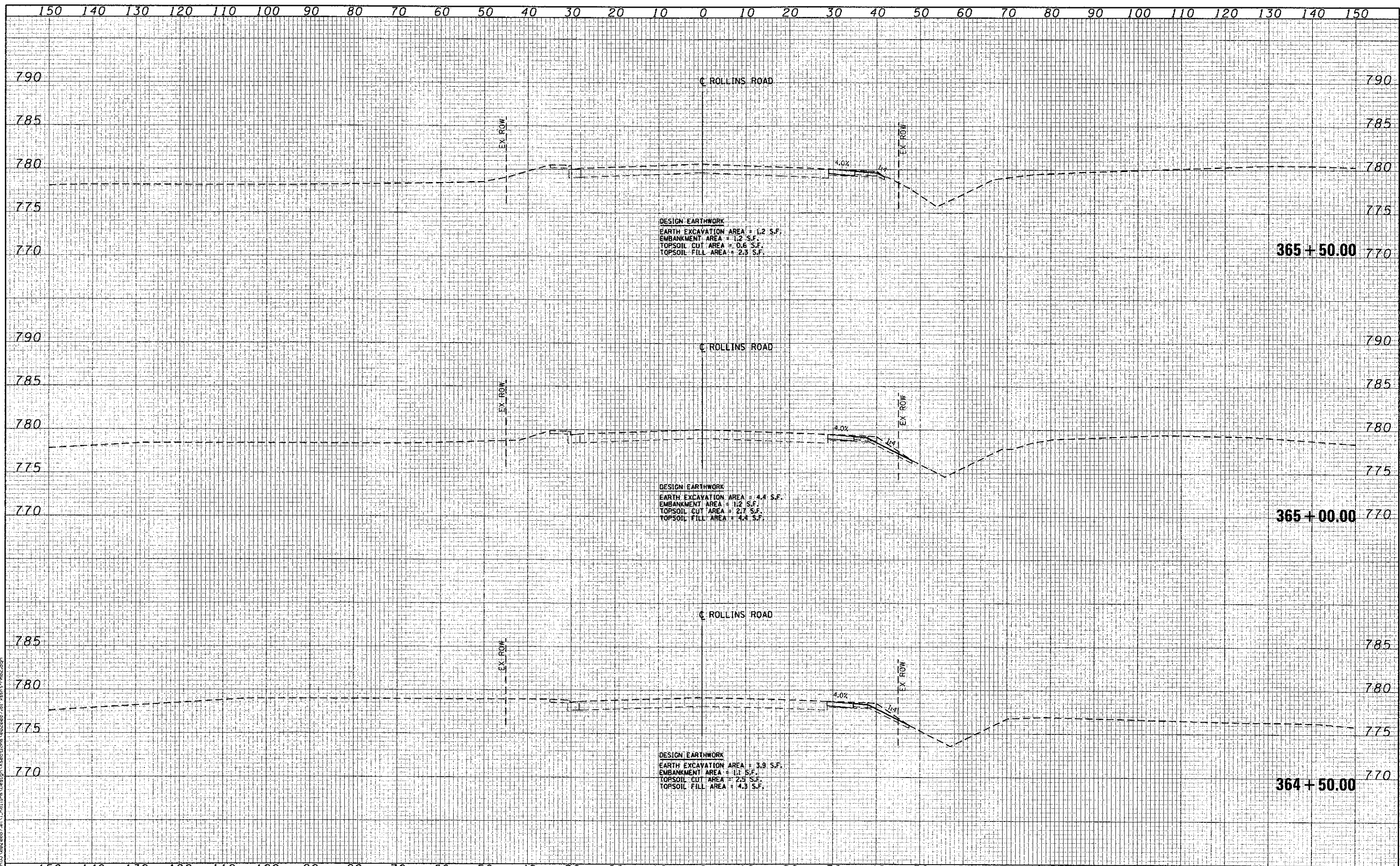
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

SCALE: SHEET NO. OF SHEETS STA. 363+00.00 TO STA. 364+00.00

**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-9T	LAKE	118	90
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

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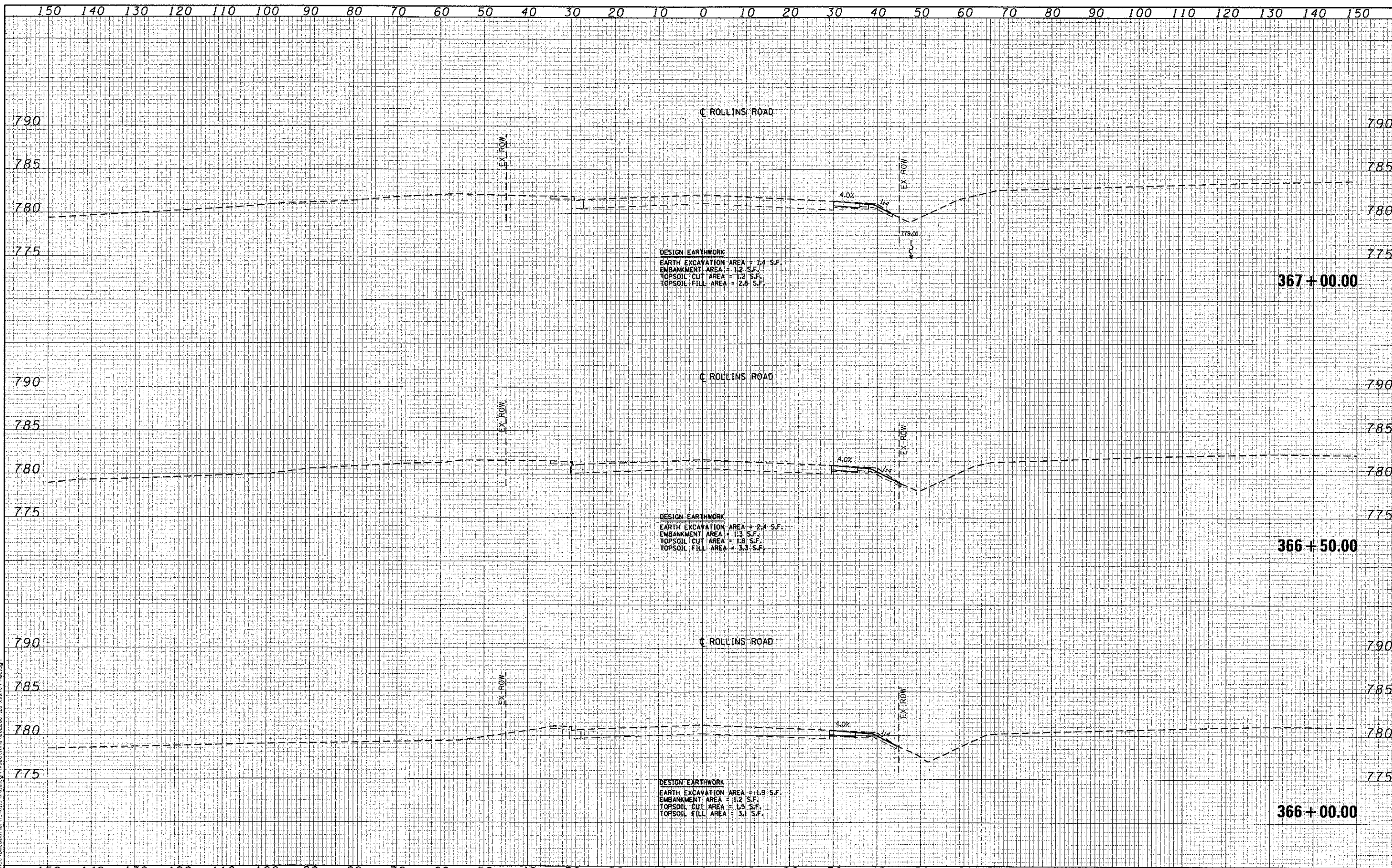
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	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 364+50.00 TO STA. 365+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	91
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				CONTRACT NO. 63807

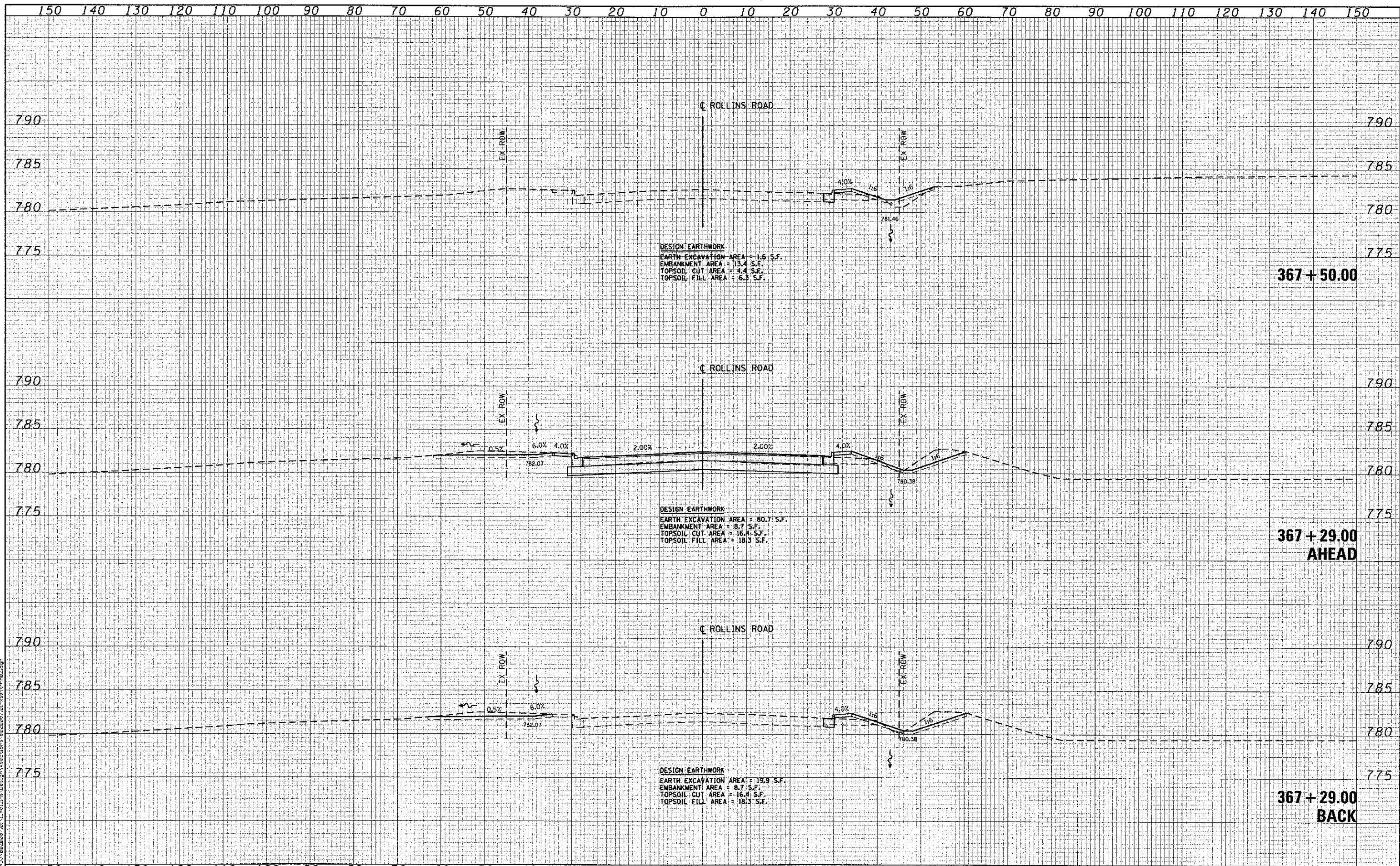


DESIGN EARTHWORK
 EARTH EXCAVATION AREA = 1.4 S.F.
 EMBANKMENT AREA = 1.2 S.F.
 TOPSOIL CUT AREA = 1.2 S.F.
 TOPSOIL FILL AREA = 2.5 S.F.

DESIGN EARTHWORK
 EARTH EXCAVATION AREA = 2.4 S.F.
 EMBANKMENT AREA = 1.3 S.F.
 TOPSOIL CUT AREA = 1.8 S.F.
 TOPSOIL FILL AREA = 3.3 S.F.

DESIGN EARTHWORK
 EARTH EXCAVATION AREA = 1.9 S.F.
 EMBANKMENT AREA = 1.2 S.F.
 TOPSOIL CUT AREA = 1.5 S.F.
 TOPSOIL FILL AREA = 3.1 S.F.

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**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

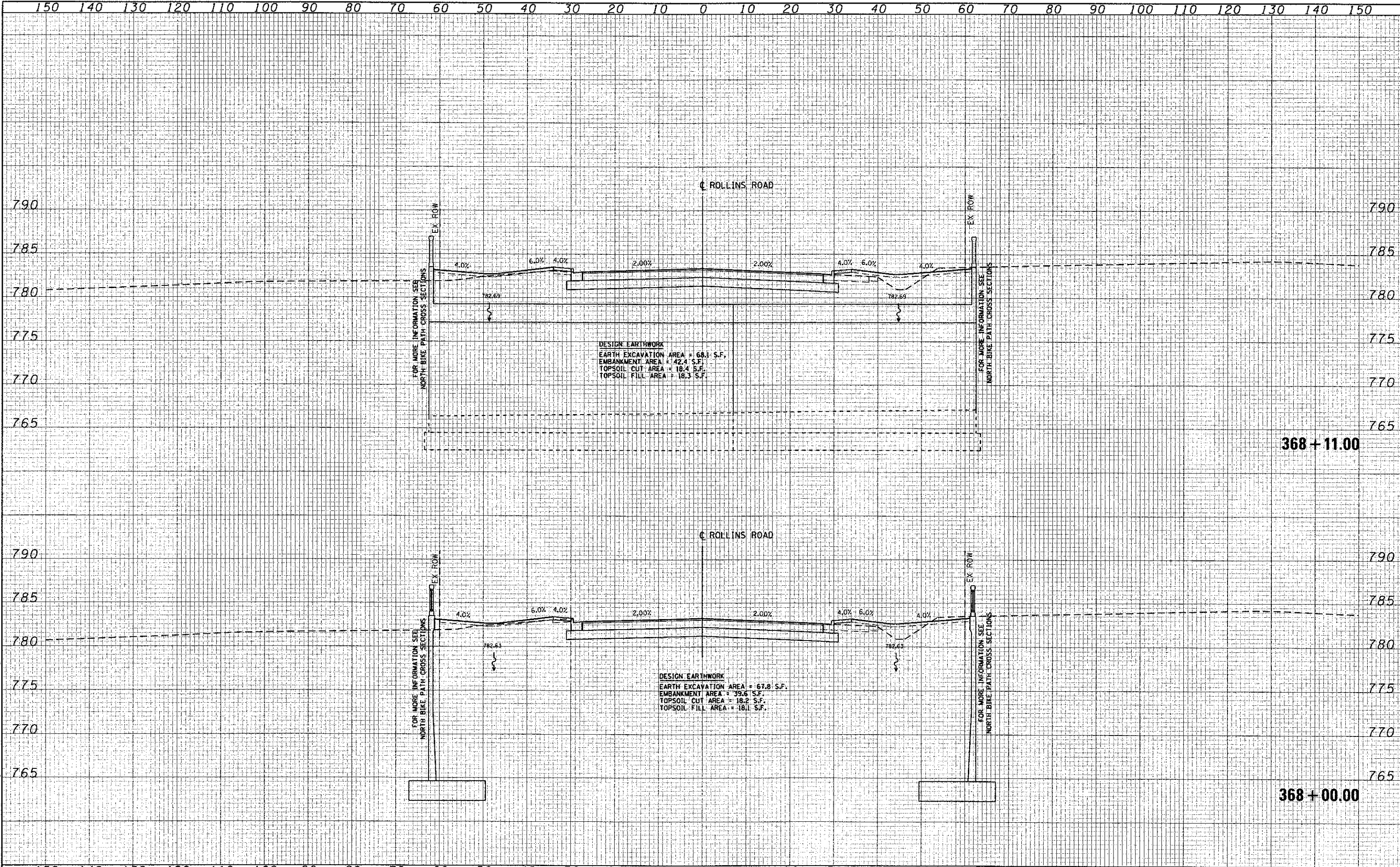
**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 367+50.00 TO STA. 367+51.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	93
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

CONTRACT NO. 63807

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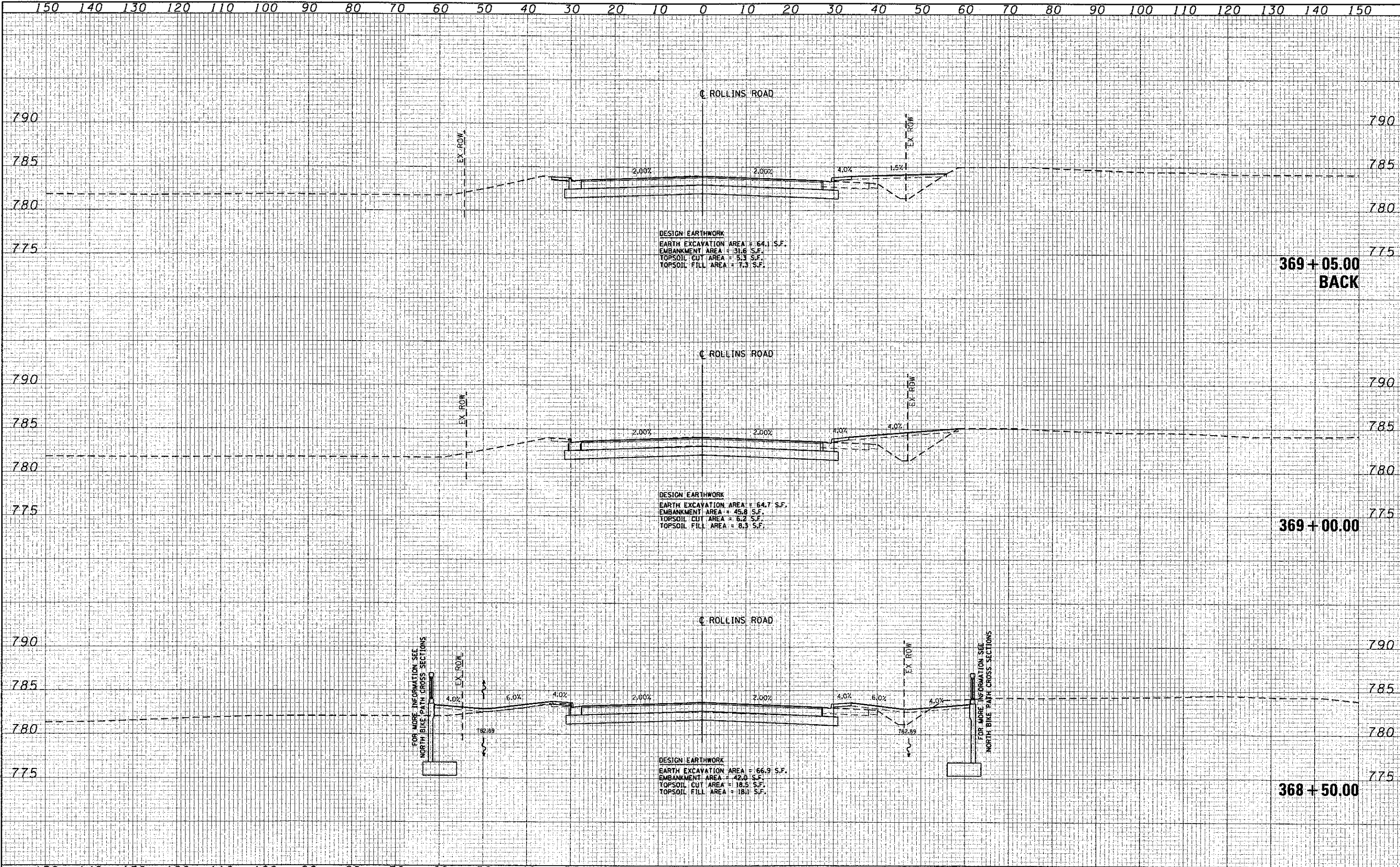
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 368+00.00 TO STA. 368+11.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	94
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

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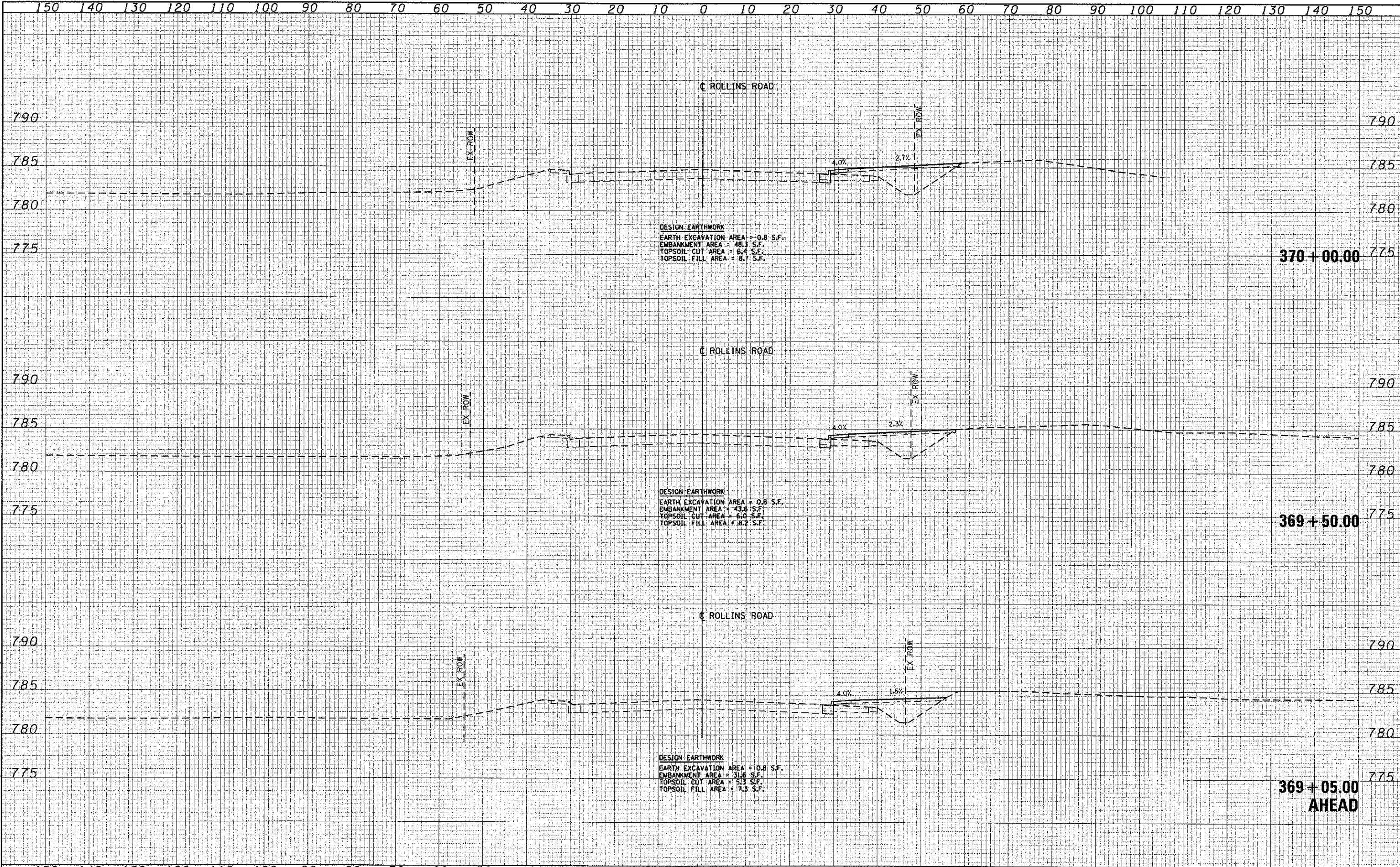
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	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
ROLLINS ROAD - FINAL
ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 368+50.00 TO STA. 368+71.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	95
CONTRACT NO. 63807				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



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PLOT SCALE = 20.0000' / 1" =	DRAWN - NT	REVISED -
PLOT DATE = 4/8/2013	CHECKED - MJL	REVISED -
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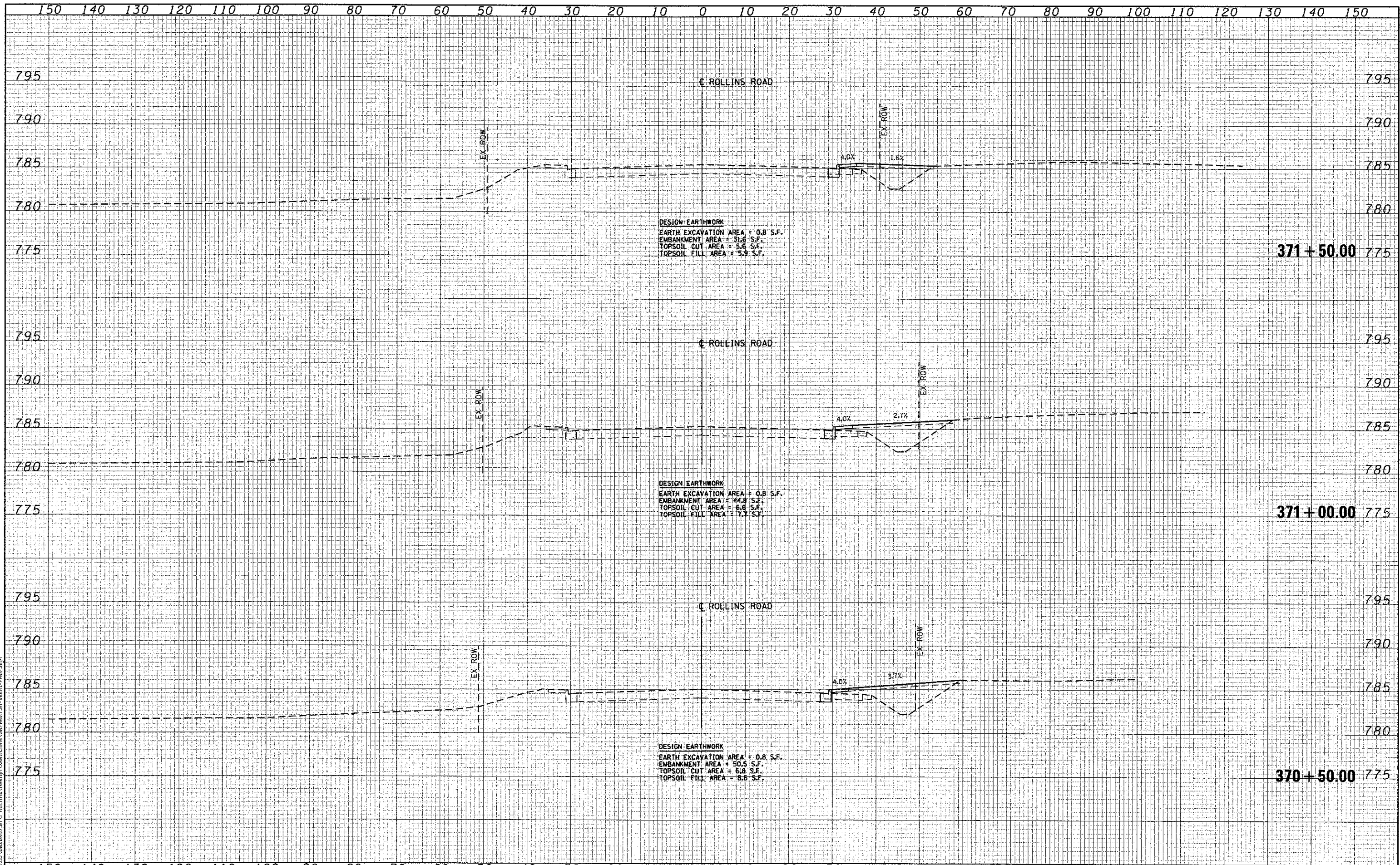
**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 ROLLINS ROAD - FINAL
 ROLLINS ROAD UNDERPASS**

SCALE: SHEET NO. OF SHEETS STA. 369+00.00 TO STA. 370+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	96
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				CONTRACT NO. 63807

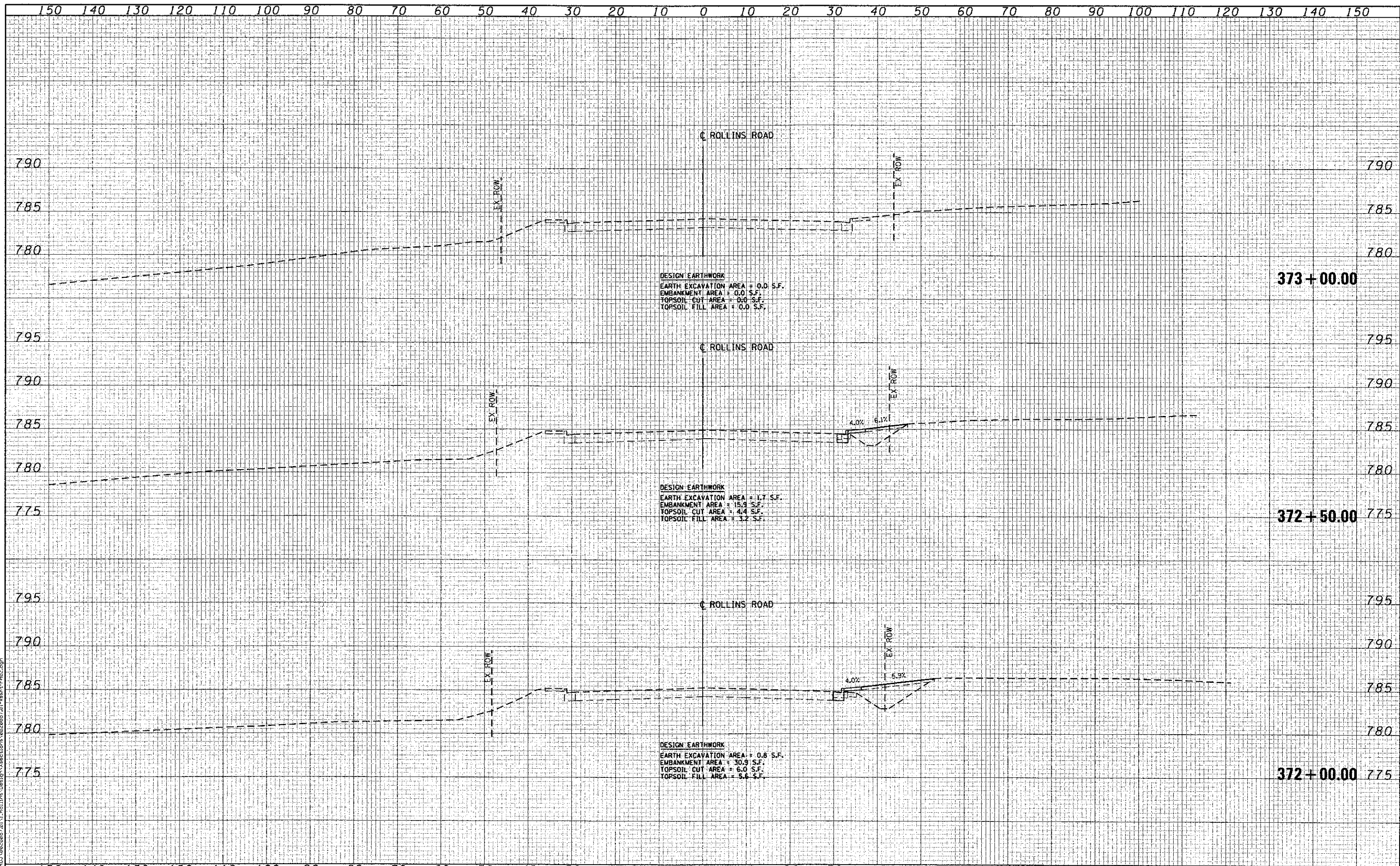
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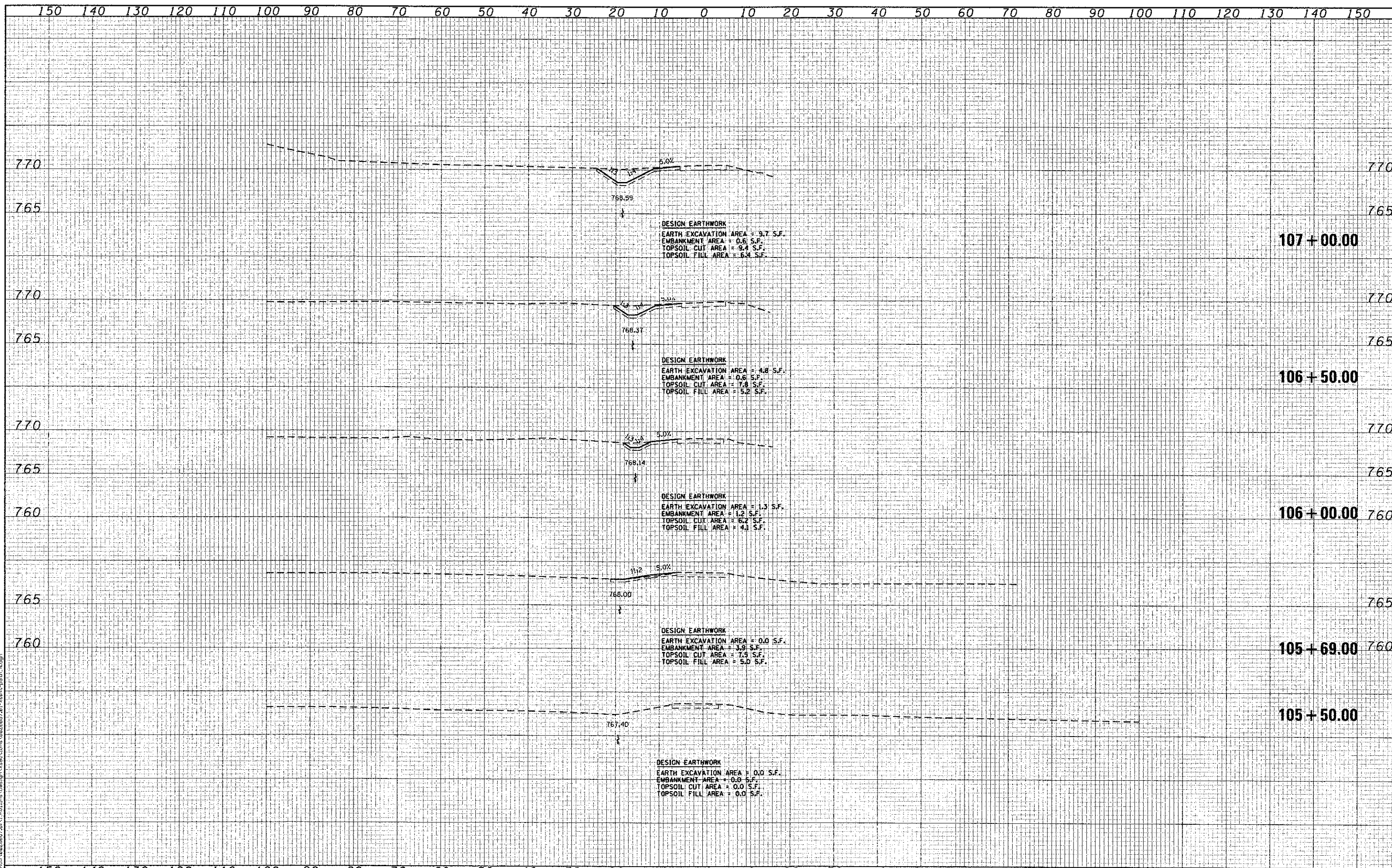
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 EMBANKMENT AREA = 31.6 S.F.
 TOPSOIL CUT AREA = 5.6 S.F.
 TOPSOIL FILL AREA = 3.3 S.F.

DESIGN EARTHWORK
 EARTH EXCAVATION AREA = 0.8 S.F.
 EMBANKMENT AREA = 44.8 S.F.
 TOPSOIL CUT AREA = 6.6 S.F.
 TOPSOIL FILL AREA = 7.7 S.F.

DESIGN EARTHWORK
 EARTH EXCAVATION AREA = 0.8 S.F.
 EMBANKMENT AREA = 50.5 S.F.
 TOPSOIL CUT AREA = 6.8 S.F.
 TOPSOIL FILL AREA = 8.6 S.F.



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 CONSULTING ENGINEERS
 5907 North Cumberland Avenue, Suite 402
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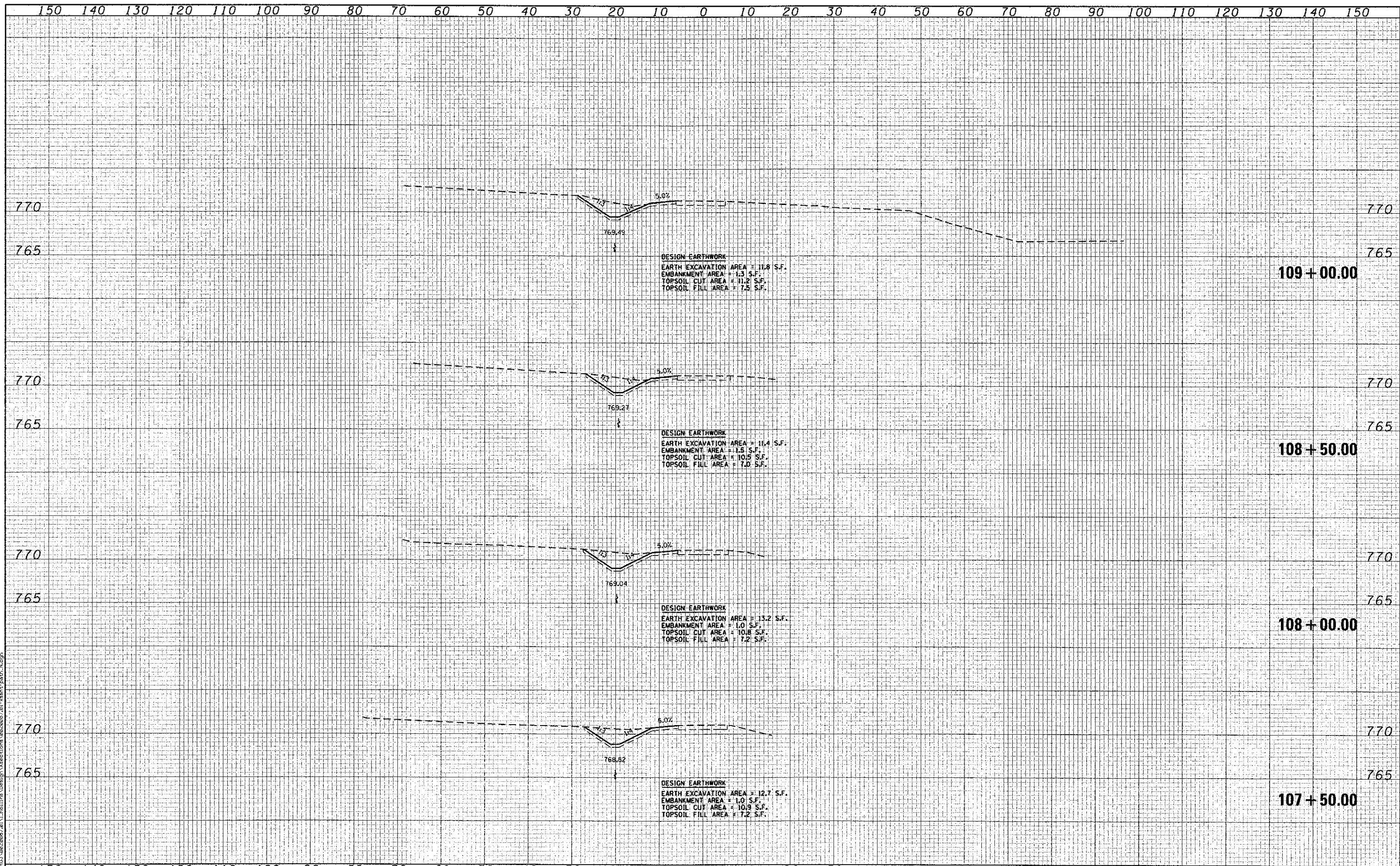
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	DATE - 4/8/2013	REVISED -

**MILLENNIUM TRAIL
 LAKE COUNTY FOREST PRESERVES**

**CROSS SECTIONS
 MILLENNIUM TRAIL - NORTH ALIGNMENT
 ROLLINS ROAD UNDERPASS**

SCALE:	SHEET NO. OF SHEETS	STA. 105+00.00 TO STA. 107+00.00
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
181	12-F3000-01-BT	LAKE	118	99
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				CONTRACT NO. 63807



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