

04-24-2015 LETTING ITEM 170

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

FOR INDEX OF SHEETS, SEE SHEET NO. 2

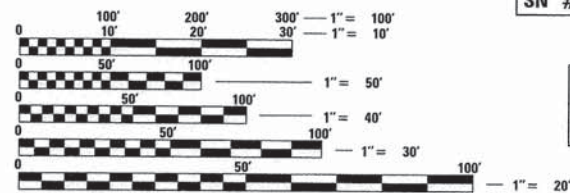
NORTH BRANCH BIKE TRAIL EXTENSION  
W DEVON AVE TO W FOSTER AVE  
BICYCLE TRAIL, RR GRADE SEPARATION, TRAFFIC SIGNALS

SECTION NO. 08-F3000-21-BT  
PROJECT NO. CMM-9003(099)  
FOREST PRESERVE DISTRICT OF COOK COUNTY  
COOK COUNTY  
JOB NO: C-91-047-09

DESIGN SPEED  
20 MPH

DESIGNATION  
BIKE TRAIL

PROJECT IS LOCATED IN  
THE CITY OF CHICAGO



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.

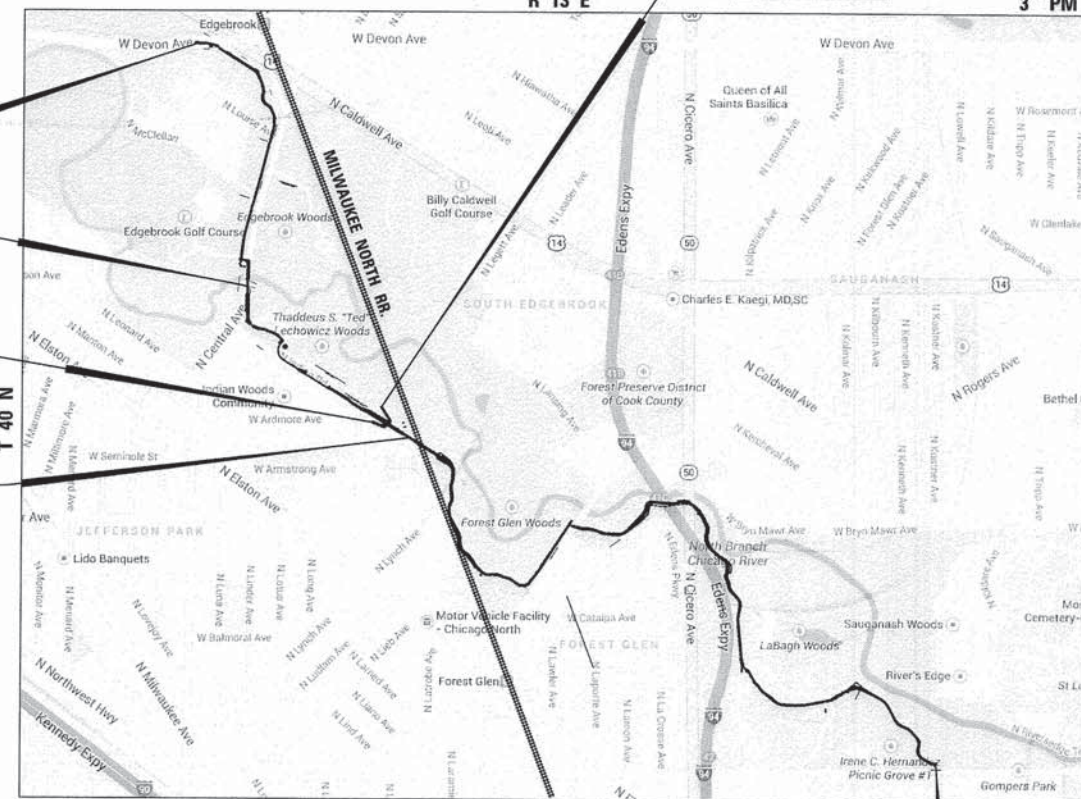
J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

BEGIN PROJECT  
STA. 10 + 00.00

PROP. BRIDGE  
STA. 44 + 19.56  
SN #016-P017

BEGIN ACCESS  
ROAD PROJECT  
STA. 500 + 00.00

PROP. BRIDGE  
STA. 70 + 52.82  
SN #016-P021



LOCATION MAP  
(NOT TO SCALE)

NET GROSS LENGTH = 16,028.90 FT = 3.04 MILES

END ACCESS  
ROAD PROJECT  
STA. 504 + 09.68

END PROJECT  
STA. 166 + 19.22

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	08-F3000-21-BT	COOK	129	1
FED. ROAD DIST. NO. -	ILLINOIS	CONTRACT NO.	61A86	



LOCATION OF SECTION INDICATED THIS: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Approved Oct 20 2014  
*Chris Statton*  
FOREST PRESERVE DISTRICT OF COOK COUNTY

Passed Nov 6 2014  
*CT Havelich*  
DISTRICT #1 ENGINEER OF LOCAL ROADS AND STREETS

Releasing for Bid  
Based on Limited  
Review November 6 2014  
*John Ferguson*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION #1 ENGINEER



SIGNATURE  
*David D. Landeweer*  
10/20/14  
DATE  
LICENSE EXPIRES 11/30/2015

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OF THE STATE OF ILLINOIS

PLANS PREPARED BY:  
**URS** 100 South Wacker Drive,  
Suite 500  
CHICAGO, IL. 60606  
TEL. (312)-939-1000

FEDERAL AID PROGRAM ENGINEER: FAWAD AQUEEL, P.E., P.T.O.E. 847-705-4021, SCHAUMBURG, IL

CONTRACT NO. 61A86

## INDEX OF SHEETS

1	TITLE SHEET
2	INDEX OF SHEETS, GENERAL CONSTRUCTION NOTES & STATE STANDARDS
3-6	SUMMARY OF QUANTITIES
7-10	TREE REMOVAL & EARTHWORK SCHEDULES
11	TYPICAL SECTIONS
12-15	ALIGNMENTS, TIES & BENCHMARK
16-27	PLAN AND PROFILE SHEETS - TRAIL
28	PLAN AND PROFILE SHEETS - MWRD
29-38	MISCELLANEOUS DETAILS
39-58	STRUCTURAL BRIDGE SHEETS
59-75	RETAINING WALL SHEETS
76	SIGNAL SHEETS
77-87	CDOT DETAILS
88-92	DISTRICT DETAILS
93-129	CROSS SECTIONS

## HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
424001-07	PERPENDICULAR CURB RAMP FOR SIDEWALKS
424011-02	CORNER PARALLEL CURB RAMP FOR SIDEWALKS
424016-02	MID-BLOCK CURB RAMP FOR SIDEWALKS
424021-03	DEPRESSED CORNER FOR SIDEWALKS
424026-01	ENTRANCE / ALLEY PEDESTRIAN CROSSINGS
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542306-02	PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606201-02	TYPE B GUTTER (INLET, OUTLET, AND ENTRANCE)
664001-02	CHAIN LINK FENCE
701006-05	OFF ROAD OPERATION-2L2W - 15 FT TO EOP
701101-04	OFF ROAD OPERATIONS, MULTILANE, 15'(4.5m) TO 24'(7.00m) FROM PAVEMENT EDGE
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701606-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-09	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-05	LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS & MARKERS)

## DISTRICT ONE DETAILS

BD-24	CURB AND GUTTER REMOVAL AND REPLACEMENT
BD-51	BENCHING DETAIL FOR EMBANKMENT WIDENING
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
TC-13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TC-18	SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

## BENCHMARKS /CONTROL POINTS

SEE ALIGNMENTS, TIES AND BENCHMARK SHEETS

## FLOODPLAIN MANAGEMENT

THE COMPENSATORY STORAGE SHALL BE PROVIDED AND OPERATED PRIOR TO PLACEMENT OF THE FILL, STRUCTURES OR OTHER MATERIALS IN THE REGULATORY FLOODPLAIN.

## CONSTRUCTION ACCESS LOCATIONS

THE CONSTRUCTION ACCESS LOCATIONS SHALL AVOID WETLAND, WETLAND BUFFER AND RIPARIAN AREAS.

## COMMITMENTS

NO CONSTRUCTION TRAFFIC ON BRYN MAWR AVENUE OR INDIAN ROAD.



100 SOUTH WACKER DRIVE, SUITE 500  
CHICAGO, IL 60606  
312-339-1000

USER NAME = David.Landwehr	DESIGNED - PMV	REVISED -
PLOT SCALE = 10,000' / 1" = 1000'	DRAWN - PMV	REVISED -
PLOT DATE = 12/15/2014	CHECKED - NPP	REVISED -
	DATE = 10/20/14	REVISED -

## GENERAL NOTES

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT 847-705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED UTILITY FACILITIES. (48 HOURS NOTIFICATION IS REQUIRED). ALL STATION-OFFSET CALL OUTS AND CURVE DATA ON THE PLANS REFER TO THE PROPOSED CENTERLINE UNLESS OTHERWISE SHOWN. SPECIAL ATTENTION IS CALLED TO ARTICLE 107.12 REGARDING RAILROAD FLAGGERS. THE NAMES AND TELEPHONE NUMBERS OF THE RAILROAD ENGINEERS ARE: MR. DANIEL KNEITA (METRA) 312-322-8016

IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COORDINATE WITH THE METRA RAILROAD WHENEVER CONSTRUCTION ACTIVITY IS WITHIN 25 FEET OF THE RAILROAD ROW. THE CONTRACTOR SHALL RETAIN FLAGMEN EMPLOYED AND DESIGNATED BY THE METRA RAILROAD TO MONITOR ON-COMING TRAIN TRAFFIC, AND ADVISE CONTRACTOR PERSONNEL SHEN ACTIVITY ON OR NEAR THE RAILROAD RIGHT-OF-WAY MAY PROCEED. THIS ITEM WILL BE PAID FOR ACCORDING TO ARTICLE 107.12 AND WILL BE REIMBURSED ACCORDING TO ARTICLE 109.05.

## SPECIFICATIONS

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS. WHEN NECESSARY, LANE CLOSURES ON IL 50 (CICERO AVE), US 14 (CALDWELL AVE), N. LEHIGH, FOSTER AVE, AND W. DEVON AVE WILL ONLY BE PERMITTED BETWEEN THE HOURS OF 9 AM AND 3 PM. ANY WORK ON HOLIDAYS AND WEEKENDS WILL NEED PRIOR APPROVAL FROM THE DISTRICT. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2012, THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", JULY 2009 6TH EDITION, THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", LATEST EDITION, THE DETAILS INCLUDED IN THE PLANS, AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

## STANDARDS

ANY REFERENCE TO "STANDARDS" THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARD OF IDOT AS LISTED ON THIS SHEET.

## COORDINATION

THE CONTRACTOR SHALL NOTIFY THE FOREST PRESERVE DISTRICT OF COOK COUNTY AT LEAST 48 HOURS IN ADVANCE OF BEGINNING WORK, AND SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH THE ENGINEER. THE CONTRACTOR SHALL ALSO OBTAIN ANY AND ALL NECESSARY PERMITS REQUIRED BEFORE THE START OF ANY CONSTRUCTION.

## PUBLIC OR PRIVATE UTILITIES

THE LOCATIONS OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE, AND THE DEPARTMENT AND DISTRICT DO NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR SHALL BE REQUIRED TO ASCERTAIN THE EXACT LOCATIONS OF SUCH UTILITIES AND EXERCISE CARE DURING CONSTRUCTION OPERATIONS SO AS NOT TO DAMAGE THEM, IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND ARTICLE 107.20 OF THE "STANDARD SPECIFICATIONS". THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITY OWNERS SO THAT THEIR FACILITIES MAY BE ADJUSTED OR RELOCATED, IF NECESSARY, PRIOR TO THE START OF CONSTRUCTION OPERATIONS UNLESS OTHERWISE NOTED IN THE PLANS. ALL RELOCATION WORK ON EXISTING PRIVATE UTILITIES WILL BE DONE BY THE OWNER OF THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR DESTRUCTION OF PUBLIC OR PRIVATE PROPERTY, AND SHALL RESTORE SUCH PROPERTY AT HIS/HER OWN EXPENSE.

## SURVEY AND MONUMENTS

ALL ELEVATIONS IN THE PLANS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS OR PROPERTY OR REFERENCE MARKERS UNTIL THE OWNER, HIS AGENT OR AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE MONUMENTS ARE REMOVED.

## DISPOSAL OF MATERIALS

THE CONTRACTOR SHALL BE REQUIRED TO DISPOSE OF ALL SIDEWALK, CURB AND GUTTER, PAVEMENT, AND ALL OTHER MATERIALS EXCAVATED OR REMOVED DUE TO CONSTRUCTION OPERATIONS, AT HIS EXPENSE. NO PAYMENT WILL BE MADE FOR HAULING OR TRUCKING MATERIAL TO LOCATIONS, PROVIDED BY THE CONTRACTOR, OUTSIDE THE LIMITS OF THE IMPROVEMENT.

DURING CONSTRUCTION OPERATIONS, WHENEVER ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES, SUCH THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, IT SHALL BE REMOVED BY THE CONTRACTOR AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS. THE WORK SPECIFIED ABOVE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE COST OF EARTH EXCAVATION.

WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS OR CATCH BASINS. HE SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS, AND DISCHARGE SAME. HE SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET, AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM THESE TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH SEWERS ARE BUILT AND IN SERVICE. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF PIPE CULVERTS. BEFORE ORDERING PIPE CULVERTS, THE CONTRACTOR SHALL CONTACT THE ENGINEER AS TO THE EXACT LENGTH AND QUANTITY REQUIRED.

## UNSUITABLE MATERIAL

BEFORE REMOVAL OF ANY UNSUITABLE MATERIAL, THE CONTRACTOR SHALL TREAT THE SUBGRADE AS PER ARTICLE 301.03 OF THE "STANDARD SPECIFICATIONS" TO THE SATISFACTION OF THE ENGINEER. UNSUITABLE MATERIAL SHALL NOT BE USED AS EMBANKMENT OR FILL UNDER THE PROPOSED TRAIL AS SHOWN ON THE TYPICAL CROSS SECTIONS.

## GENERAL CONSTRUCTION NOTES

**STOCKPILES** STOCKPILES OF TOPSOIL AND OTHER MATERIALS SHALL NOT BE LOCATED WITHIN A SPECIAL MANAGEMENT AREA. APPROVAL OF THE LOCATION MUST BE OBTAINED FROM THE ENGINEER PRIOR TO PLACEMENT. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN THREE DAYS, EROSION CONTROL MEASURES SHALL BE PROVIDED. STOCKPILES TO REMAIN IN PLACE FOR 30 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.

**TREE TRIMMING** ALL BRANCHES THAT ARE LESS THAN 12 FEET ABOVE THE SURFACE OF THE TRAIL SHALL BE REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH ANSI STANDARD A300-2001 (PART 1) FOR TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE AND ANSI Z133.1-1994 FOR TREE CARE OPERATIONS PRUNING, TRIMMING, REPAIRING, MAINTAINING AND REMOVING TREES AND CUTTING BRUSH. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF TREE REMOVAL.

**ACCESS TO PROPERTY** THE CONTRACTOR SHALL MAINTAIN ACCESS TO ABUTTING PROPERTY DURING THE CONSTRUCTION OF THIS PROJECT, EXCEPT FOR PERIODS OF SHORT DURATION AS APPROVED BY THE ENGINEER.

**SAW CUTTING** THE LIMITS OF REMOVAL OF ALL CONCRETE OR BITUMINOUS PAVEMENTS, CURBING OR SIDEWALKS SHALL BE SAWCUT IN ACCORDANCE WITH SECTION 440 OF THE "STANDARD SPECIFICATIONS" AND AT THE DIRECTION OF THE ENGINEER. THE SAW CUTTING OF BITUMINOUS PAVEMENT, DRIVEWAYS, CURBING OR SIDEWALK SHALL BE CONSIDERED INCLUDED IN THE COST OF PAVEMENT REMOVAL, CURB AND GUTTER REMOVAL AND SIDEWALK REMOVAL.

**RESTORATION ACCESS** GRASS AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED WITH SIX INCHES OF TOPSOIL AND SEED OR SOD. A. THE CONTRACTOR SHALL BE AWARE OF POTENTIAL LIMITED ACCESS TO PORTIONS OF THE PROJECT. TEMPORARY DRAINAGE CROSSINGS APPROVED BY THE ENGINEER MAY BE INSTALLED BY THE CONTRACTOR AT HIS/HER EXPENSE TO GAIN ACCESS. B. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COORDINATE WITH METRA WHENEVER CONSTRUCTION ACTIVITY IS WITHIN THE RAILROAD ROW. C. NO CONSTRUCTION TRAFFIC OR CONTRACTOR VEHICLES ALLOWED ON BRYN MAWR AVE. AT ANY TIME

## SEDIMENTATION AND EROSION CONTROL NOTES

- 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 UPLAND DISTURBANCE.
- C. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN 14 CALENDAR DAYS OF THE END OF ACTIVE HYDROLOGIC DISTURBANCE. PERMANENT STABILIZATION SHALL BE DONE WITHIN 14 DAYS AFTER COMPLETION OF FINAL GRADING.
- D. ALL STORM SEWER FACILITIES THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED, FILTERED, OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- E. 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. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS SHALL BE PERMANENTLY STABILIZED.
- F. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION AND REPAIR DURING CONSTRUCTION.
- G. 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.
- H. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL PRIOR TO THE START OF ANY EARTHWORK.
- I. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN THREE DAYS, EROSION CONTROL MEASURES SHALL BE PROVIDED BY THE CONTRACTOR.
- J. EROSION CONTROL MEASURES SHALL COMPLY WITH THE MINIMUM REQUIREMENTS OF THE COOK COUNTY STORMWATER AND FLOODPLAIN ORDINANCE SPECIFICATIONS AT ALL TIMES.

## TREE PRESERVATION NOTES

THE CONTRACTORS ATTENTION IS CALLED TO THE FACT THAT THE PRESERVATION OF EXISTING TREES IS OF UTMOST IMPORTANCE TO THE FOREST PRESERVE DISTRICT OF COOK COUNTY. ALL TREE PROTECTION, TREE REMOVAL, PRUNING AND ROOT PRUNING SHALL BE COMPLETED BEFORE CONSTRUCTION OPERATIONS COMMENCE IN ANY AREA. AT NO TIME SHALL THE CONTRACTOR PRUNE OR REMOVE TREES UNLESS SPECIFICALLY DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND ALL TREES WITHIN THE CONSTRUCTION AREA TO ESTABLISH A "TREE PROTECTION ZONE" AND AROUND EXISTING WETLANDS TO ESTABLISH A "WETLAND PROTECTION ZONE" BEFORE ANY WORK BEGINS OR ANY MATERIAL IS DELIVERED TO THE JOBSITE. NO WORK IS TO BE PERFORMED (OTHER THAN ROOT PRUNING), MATERIALS STORED OR VEHICLES DRIVEN OR PARKED WITHIN THE "TREE PROTECTION ZONE" AND "WETLAND PROTECTION ZONE". REMOVE PROTECTIVE TEMPORARY FENCE ONLY AFTER ALL CONSTRUCTION WORK HAS BEEN COMPLETED.

THE CONTRACTOR SHALL TAKE EXTRA CARE IN GRADING AND EXCAVATING NEAR TREES WHICH ARE NOT MARKED FOR REMOVAL SO AS NOT TO CAUSE INJURY TO THE ROOT SYSTEM OR TRUNKS. MAJOR ROOTS OF A TREE THAT ARE TO REMAIN IN PLACE EXTENDING INTO THE EXCAVATION AREAS AT AN ELEVATION THAT WOULD INTERFERE WITH ANY PORTION OF THE PLANNED CONSTRUCTION SHALL BE SEVERED AT A POINT IMMEDIATELY OUTSIDE OF THE EXCAVATION AREA IN A MANNER THAT WILL CAUSE THE LEAST AMOUNT OF SYSTEMIC DAMAGE TO THE REMAINING TREE STRUCTURE.

TREE ROOT PRUNING IS TO BE USED ON EXISTING TREES WHEN NECESSARY TO CUT MAJOR TREE ROOTS TO PREVENT THE RIPPING UP OF ROOTS WHEN TRENCHING OR EXCAVATION IS WITHIN THE ROOT ZONE OF ADJACENT TREES TO REMAIN. SUPPLEMENTAL WATERING IS SPECIFIED FOR TREES AND SHRUBS THAT WILL BE DISTURBED BY CONSTRUCTION BUT WILL REMAIN. SUPPLEMENTAL WATERING OF TREES SHOULD BEGIN IMMEDIATELY AFTER ROOT PRUNING OF THE TREES HAS OCCURRED.

THE CONTRACTOR SHALL ATTACH AN ALUMINUM SIGN WITH THE FOLLOWING TEXT: "PROTECTED WETLAND-NO INTRUSION". THE SIGN(S) SHALL BE ATTACHED TO THE STAKES BY A METHOD APPROVED BY THE ENGINEER. THE SIGN(S) WILL BE PROVIDED BY THE DEPARTMENT AND SHALL BE PICKED UP BY THE CONTRACTOR FROM THE DISTRICT ONE ROADSIDE DEVELOPMENT ARCHITECT IN SCHAMBURG, ILLINOIS. SCHEDULING THE PICKUP OF THE SIGNS CAN BE ARRANGED BY CONTACTING THE DISTRICT ONE ROADSIDE DEVELOPMENT UNIT AT (847) 705-4171. WHEN WORK HAS BEEN COMPLETED, THE SIGN(S) SHALL BE RETURNED TO THE DISTRICT ONE ROADSIDE DEVELOPMENT UNIT. THE COST OF PICKING UP, ATTACHING THE SIGNS TO THE TEMPORARY FENCE STAKES AND RETURNING THE SIGNS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR TEMPORARY FENCE.

## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

### NORTH BRANCH BIKE TRAIL EXTENSION INDEX OF SHEETS, GENERAL CONSTRUCTION NOTES AND HIGHWAY STANDARDS

SCALE: — SHEET NO. 1 OF 1 SHEETS STA. — TO STA. —

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	12
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

**"SUMMARY OF QUANTITIES"**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	4,550
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	3037
20101000	TEMPORARY FENCE	FOOT	3325
20101100	TREE TRUNK PROTECTION	EACH	30
* 20101200	TREE ROOT PRUNING	EACH	34
* 20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	50
* 20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	50
20200100	EARTH EXCAVATION	CU YD	1589
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	10112
20400800	FURNISHED EXCAVATION	CU YD	8658
20700220	POROUS GRANULAR EMBANKMENT	CU YD	106
20800150	TRENCH BACKFILL	CU YD	75
20900110	POROUS GRANULAR BACKFILL	CU YD	366
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	15665
* 21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	17766
* 25000115	SEEDING, CLASS 1B	ACRE	1.4
* 25000312	SEEDING, CLASS 4A	ACRE	2.1
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	129
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	129
* 25100115	MULCH, METHOD 2	ACRE	4.0
* 25100630	EROSION CONTROL BLANKET	SQ YD	10281

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
* 25200200	SUPPLEMENTAL WATERING	UNIT	100
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	356
28000305	TEMPORARY DITCH CHECKS	FOOT	88
28000315	AGGREGATE DITCH CHECKS	TON	29
28000400	PERMETER EROSION BARRIER	FOOT	23132
28100103	STONE RIP RAP, CLASS A2	SQ YD	30
28100107	STONE RIP RAP, CLASS A4	SQ YD	317
28200200	FILTER FABRIC	SQ YD	657
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	1473
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	1122
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	13907
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	31290
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	1558
42001300	PROTECTIVE COAT	SQ YD	1210
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	9892
42400800	DETECTABLE WARNINGS	SQ FT	535
44000100	PAVEMENT REMOVAL	SQ YD	220
44000600	SIDEWALK REMOVAL	SQ FT	6088
50102400	CONCRETE REMOVAL	CU YD	137.3
50104650	SLOPE WALL REMOVAL	SQ YD	237
50105220	PIPE CULVERT REMOVAL	FOOT	24

\* = SPECIALTY ITEMS

FILE NAME: G:\C:\csc\F02\25107285\NorthBranchBikeTrail\Phase 2\Engineering\General\SummaryOfQuantities.dwg



USER NAME = David.Londeweer  
 PLOT SCALE = 10,000" = 1' in.  
 PLOT DATE = 12/15/2014

DESIGNED - -  
 DRAWN - -  
 CHECKED - -  
 DATE - -

REVISED - -  
 REVISED - -  
 REVISED - -  
 REVISED - -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION  
 SUMMARY OF QUANTITIES**

SCALE: SHEET NO. OF 1 SHEETS STA. TO STA. —

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	3
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 61A86	

"SUMMARY OF QUANTITIES"

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
50200100	STRUCTURE EXCAVATION	CU YD	1648
50200300	COFFERDAM EXCAVATION	CU YD	59
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	106
50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1
50201102	COFFERDAM (TYPE 1) (LOCATION - 2)	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	464.7
50500505	STUD SHEAR CONNECTORS	EACH	1474
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	65927
* 50901720	BICYCLE RAILING	FOOT	284
* 50901760	PIPE HANDRAIL	FOOT	372
51100100	SLOPE WALL 4 INCH	SQ YD	358
51201600	FURNISHING STEEL PILES HP 12X53	FOOT	1636
51201610	FURNISHING STEEL PILES HP 12X63	FOOT	204
51202305	DRIVING PILES	FOOT	1840
51203600	TEST PILE STEEL HP 12X53	EACH	7
51203610	TEST PILE STEEL HP 12X63	EACH	2
51204650	PILE SHOES	EACH	61
52000110	PREFORMED JOINT STRIP SEAL	FOOT	117
542A0217	PIPE CULVERTS, CLASS A, TYPE I 12"	FOOT	214
542A0220	PIPE CULVERTS, CLASS A, TYPE I 15"	FOOT	134
542A0223	PIPE CULVERTS, CLASS A, TYPE I 18"	FOOT	24

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
542A0235	PIPE CULVERTS, CLASS A, TYPE I 30"	FOOT	30
542A5485	PIPE CULVERTS, CLASS A, TYPE I EQUIVALENT ROUND-SIZE 30"	FOOT	96
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	22
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	8
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	2
54213675	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"	EACH	2
54214515	PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 30"	EACH	8
55100700	STORM SEWER REMOVAL 15"	FOOT	20
58700300	CONCRETE SEALER	SQ FT	3342
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	406
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	30.8
60250200	CATCH BASINS TO BE ADJUSTED	EACH	1
60253800	CATCH BASINS TO BE RECONSTRUCTED WITH NEW TYPE 8 GRATE	EACH	1
60255500	MANHOLES TO BE ADJUSTED	EACH	4
60266600	VALVE BOXES TO BE ADJUSTED	EACH	1
60602800	CONCRETE GUTTER, TYPE B	FOOT	243
63200310	GUARDRAIL REMOVAL	FOOT	25
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	12
67100100	MOBILIZATION	L SUM	1
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1

\* = SPECIALTY ITEMS

FILE NAME: D:\Cook\Fig\_20362781\_NorthBranchTrail\Roadway\Phase 2\_Engineering\Quantities\SummaryofQuantities.dgn



USER NAME = David.Lordweber  
 PLOT SCALE = 1/8"=1'-0"  
 PLOT DATE = 12/15/2014

DESIGNED - -  
 DRAWN - -  
 CHECKED - -  
 DATE - -

REVISED - -  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	4
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 61A86	

**"SUMMARY OF QUANTITIES"**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DAY	60
72000100	SIGN PANEL - TYPE 1	SQ FT	297
72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	1
72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	8
72400600	RELOCATE SIGN PANEL ASSEMBLY - TYPE B	EACH	2
72900100	METAL POST - TYPE A	FOOT	425
72900200	METAL POST - TYPE B	FOOT	392
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1703
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1529
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	163
* 78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	3132
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	13214
* 78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT	105
* 78300100	PAVEMENT MARKING REMOVAL	SQ FT	382
* 81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	495
* 87301270	ELECTRIC CABLE IN CONDUIT #14 10C	FOOT	253
* 87301800	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 4 2 C	FOOT	64
* 87502690	TRAFFIC SIGNAL POST, ALUMINUM 15 FT.	EACH	3
* 88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
* 88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
* 88800100	PEDESTRIAN PUSH BUTTON	EACH	2
* 89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
Z0004562	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	371
Z0007116	TREATED TIMBER LAGGING	SQ FT	2479
Z0013302	SEGMENTAL CONCRETE BLOCK WALL	SQ FT	1765
Z0022800	FENCE REMOVAL	FOOT	20
Z0026402	FURNISHING SOLDIER PILES (HP SECTION)	FOOT	1679
* Z0033038	CONTROLLER, TRAFFIC, 16 LOAD BAY, P CABINET	EACH	1
* Z0033050	COAXIAL CABLE IN CONDUIT	FOOT	117
Z0034210	MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ FT	2793
Z0042300	PORTLAND CEMENT CONCRETE SIDEWALK CURB	FOOT	480
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	747
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1
* Z0055800	RUSTIC RAIL FENCE	FOOT	579
Z0056610	STORM SEWER (WATER MAIN REQUIREMENTS) 15 INCH	FOOT	20
* Z0069600	STREET LIGHT STANDARDS TO BE RELOCATED	EACH	4
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	1857
Δ Z0076600	TRAINEES	HOUR	500
Δ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500
LR355225	BASE COURSE AGGREGATE	TON	213
* A2001010	TREE, ACER RUBRUM (RED MAPLE), 1-1/4" CALIPER, BALLED AND BURLAPPED	EACH	20

\* = SPECIALTY ITEMS    Δ = CONSTRUCTION TYPE CODE 0042

FILE NAME: G:\Cadd\7312557385\NorthBranch\Ext\Roadway\Phase 2\Engineering\General\SummaryOfQuantities.dwg

USER NAME: David.Landwehr	DESIGNED: -	REVISED: -
PLOT SCALE: 1/8"=1'-0"	DRAWN: -	REVISED: -
PLOT DATE: 12/15/2014	CHECKED: -	REVISED: -
	DATE: -	REVISED: -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	5
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 61A86	

"SUMMARY OF QUANTITIES"

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
* A2002912	TREE, CELTIS OCCIDENTALIS (COMMON HACKBERRY), 1-1/2" CALIPER, BALLED AND BURLAPPED	EACH	20
* A2006414	TREE, QUERCUS ALBA (WHITE OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	25
* A2006510	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 1-1/4" CALIPER, BALLED AND BURLAPPED	EACH	15
* A2006712	TREE, QUERCUS MACROCARPA (BUR OAK), 1-1/2" CALIPER, BALLED AND BURLAPPED	EACH	20
* A2007112	TREE, QUERCUS RUBRA (RED OAK), 1-1/2" CALIPER, BALLED AND BURLAPPED	EACH	15
* A2007612	TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 1-1/2" CALIPER, BALLED AND BURLAPPED	EACH	15
* A2007814	TREE, TILIA AMERICANA (AMERICAN LINDEN/BASSWOOD), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	20
* C2C01324	SHRUB, CLETHRA ALNIFOLIA (SUMMERSWEET CLETHRA), 2' HEIGHT, CONTAINER	EACH	3
X0321322	DROP GATE	EACH	1
X0322508	PEDESTRIAN TRUSS SUPERSTRUCTURE	SQ FT	16800
* X0322690	POLE, STEEL, ANCHOR BASE, 10" DIA., 3-GAUGE, 34'-6"	EACH	3
* X0324900	SERVICE CONNECTION TO CECO LINE	EACH	1
X0325592	REMOVE AND REPLACE STONE RIPRAP	CU YD	285
X0325751	DRIVING SOLDIER PILES	FOOT	1679
* X0326328	STREET LIGHTING CABLE, 1/C NO. 6, CITY OF CHICAGO STANDARD	FOOT	1000
* X0326885	VIDEO DETECTION SYSTEM	EACH	1
* X0326968	JUNCTION BOX, POLE OR POST MOUNTED	EACH	6
X0327018	DECORATIVE SIGN POST	EACH	1
X0327285	DOWNSPOUT ADJUSTMENT	EACH	2
X0350810	BOLLARD REMOVAL	EACH	53
* X0934900	MAST ARM, STEEL, MONOTUBE, 26 FT.	EACH	3

\* = SPECIALTY ITEMS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY 0028
X5030290	STAINING CONCRETE STRUCTURES	SQ FT	2340
X5121800	PERMANENT STEEL SHEET PILING	SQ FT	7875
* X6020084	MANHOLE, SPECIAL	EACH	2
* X6640304	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	FOOT	230
* X8050095	SERVICE INSTALLATION (SPECIAL)	EACH	1
* X8140105	HANDHOLE (SPECIAL)	EACH	1
X8780105	CONCRETE FOUNDATIONS (SPECIAL)	EACH	7
* XX002182	STREET NAME SIGN MAST ARM MOUNT	EACH	3
* XX003663	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
XX006822	TRAIL HEAD MAP	EACH	10
XX007452	RELOCATE BOLLARDS	EACH	42
XX007581	PANEL REPLACEMENT (SPECIAL)	EACH	4
* XX007609	GRASS PAVERS	SQ YD	638
* XX008713	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 19/C	FOOT	332
XX008724	TRENCH AND BACKFILL WITH SCREENINGS	FOOT	280
* XX008998	ELECTRIC CABLE IN CONDUIT, VIDEO NO. 14 3C	FOOT	117

FILE NAME: D:\C:\P\02187381\Work\Drawings\Phase 2\Engineering\General\SummaryOfQuantities.dgn

USER NAME: David Landwehr	DESIGNED: -	REVISED: -
PLOT SCALE: 1/8" = 1'-0"	DRAWN: -	REVISED: -
PLOT DATE: 12/15/2014	CHECKED: -	REVISED: -
	DATE: -	REVISED: -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	6
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 61A86	

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
14+06		9.6	6	
14+07		7.3	12	
14+43	0.4			18
14+43		1.3	10	
14+49		8.0	10	
14+51		4.4	10	
14+55		7.8	6	
14+84		2.5	6	
14+84	0.2		10	
15+16	1.2		14	
15+28		7.9	8	
15+33		7.8		22
15+42	1.2			24
15+62	2.2		10	
15+88		1.9	7	
15+99		2.2		16
16+12		3.5	6	
16+15		0.4		18
16+42		10.7	6	
16+43	3.8		14	
16+72	0.4		15	
16+84		5.1	6	
17+06	3.3		6	
17+12		6.1		28
17+19		1.5		20
17+26		0.3		18
17+29		9.9	8	
17+33	0.0	0.0		20
17+45		5.9	12	
17+54		6.3	15	
17+60		8.5	15	
17+75		5.7	15	
17+87		11.0	8	
19+79		6.7		20
19+97		4.1	8	
20+12	3.1			18
20+55	0.6		12	
20+59	7.3		8	
20+65		4.2	10	
20+75		7.7	8	
20+81		7.1	8	
21+00	9.4			22
21+09	1.5		8	
21+25	5.1		12	
21+48	8.9		6	
21+93	5.0		6	
22+03		7.3	6	
22+60		8.2	8	
23+37		0.7	10	
23+64	2.3		10	
23+67	0.0		8	

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
23+89	5.7		7	
24+76	6.3		11	
25+06		8.1	14	
25+51		7.1	10	
26+77		10.4	8	
26+84		7.5		38
27+33		5.5	12	
27+51		3.4	6	
27+56		1.0	14	
27+88		4.3	8	
27+95		2.7	8	
28+02		5.3	6	
28+07		4.3	8	
30+16		4.0	7	
30+41		5.3	9	
30+46		6.2	13	
30+91		5.1	7	
31+50		6.7	6	
34+08		7.3		30
35+03		3.2		22
35+19		4.7	7	
35+83		5.7	6	
35+87		5.7	8	
35+89		4.4	12	
36+03		1.9	6	
36+03		4.5	9	
36+27		2.2	7	
36+63		0.0	8	
36+70		4.0		23
36+71		0.0	6	
36+96		7.8	8	
37+07		0.0	11	
37+21		2.6	9	
37+24	2.3		9	
37+45		4.1	12	
37+59		7.2	10	
37+60	2.8		10	
37+94		5.0	10	
38+01		7.3	10	
38+03		10.4	10	
38+45		8.0	12	
38+62		7.5	7	
38+90		5.6	7	
38+95		9.2		26
39+13		9.3	8	
39+49		11.2	8	
39+52		17.6	10	
39+53		12.3	8	
39+57		17.6	15	
39+58		11.8	8	

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
40+45	3.5		8	
40+74	1.6		15	
40+82	8.7		6	
40+85		7.5	6	
40+92	14.0		6	
40+94	1.9		6	
40+99		6.9	8	
41+17	9.8		12	
43+39	6.4		6	
44+51		5.4		30
44+58		2.3	15	
44+82		6.5	12	
45+02	2.6		6	
45+54		1.0	12	
45+99		8.3	8	
46+07	2.6		10	
46+55	9.6		15	
46+66	6.6		8	
46+75	15.1			24
47+25		1.8	12	
47+99		6.8	10	
48+28		0.6	8	
48+45		9.7	8	
48+55	8.0		7	
48+92		1.4	13	
48+92		1.4	13	
48+92		0.3	7	
48+93	3.8		6	
49+39		8.7	8	
49+48		8.6	8	
49+57		9.4	8	
50+62		8.2	13	
51+14		3.3		20
65+79	17.3			18
65+80	10.8			18
65+83	12.6		7	
65+90	13.6		6	
65+94	19.8		8	
65+97	4.7			18
66+01	12.1		11	
66+51	11.7			39
66+58	13.0		9	
66+59		3.6	12	
66+65	3.4			39
66+69	6.4		14	
67+02	7.9		14	
67+04	5.6		8	
67+04	20.8		12	
67+09	4.6		15	
67+12		5.6	15	

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
67+20	4.6		6	
67+32	15.0			33
67+32		22.0		36
67+41	3.4			16
67+46	6.1			36
67+50		28.0		38
67+65	6.2			16
67+94		6.6		38
68+04	6.7		10	
68+07		12.1	7	
68+45		11.5		26
68+47	10.3		10	
68+63	6.9			26
68+63		4.6	8	
68+66		12.2		31
68+75		3.3	12	
68+82		10.6	12	
68+85	0.0	0.0	6	
68+85		11.4		28
68+89	11.3		14	
68+95		5.9		28
69+07	9.3		8	
69+07	13.7		12	
69+11	1.7		10	
69+11		14.3		26
69+13	9.2			22
69+22	2.3			20
69+28		3.9	8	
69+38		11.3		16
69+59	8.8			20
69+66		3.5	7	
69+73		9.2	12	
69+75	2.2		7	
69+80	5.0			27
71+38	9.8		6	
71+39	12.6		6	
71+55		8.6		18
71+62	8.7		12	
71+65	3.2		6	
71+74		8.0	6	
72+01	12.3		6	
72+08	5.5		6	
72+16	7.7		10	
72+17	13.2		8	
72+37	2.3		12	
72+70	1.4		8	
72+75		6.0	13	
72+84		9.0	15	
73+21	8.9		8	
73+25	9.3		7	

FILE NAME = D:\Cook\FPL2\20327381\NorthBranchExt\Roadway\Phase 2 Engineering\General\Screen.dwg



USER NAME = David.Landwehr  
PLOT SCALE = 18,0000' / 1" =  
PLOT DATE = 12/12/2014

DESIGNED - -  
DRAWN - -  
CHECKED - -  
DATE - -

REVISED -  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
SCHEDULES - TREE REMOVAL

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	7
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
73+25		6.4	12	
73+29		7.1		16
73+97		18.1		17
74+06	4.7			22
74+23		11.6	10	
74+25	3.5		9	
74+39		8.7	6	
74+51		11.3		26
74+60		14.5	6	
74+65		21.6	15	
74+69		11.0	9	
74+69	5.1		9	
74+72		10.8	6	
74+73		13.5	6	
74+75	13.7			18
74+78		9.1	6	
74+91		25.5	15	
74+93		26.1	8	
74+94		23.2	6	
74+94	8.5		6	
74+95	13.2			16
74+97	11.0		6	
75+03		10.1	14	
75+06		21.1	6	
75+07		18.3	8	
75+07		14.7		16
75+12	23.6		12	
75+12		18.4	12	
75+15		6.2	15	
75+17		14.9	12	
75+29	0.2			28
75+31		16.0	15	
75+34		21.0	15	
75+34	21.4		10	
75+41	16.9		6	
75+45	8.4		6	
75+50	10.9		6	
75+50	13.2		14	
75+50	14.7		6	
75+53	11.6		6	
75+57		11.1		20
75+58	9.3		10	
75+65	13.4		14	
75+66		17.9	9	
75+70		15.0	9	
75+83	5.9		13	
76+05		9.0	12	
76+10		1.9	10	
76+17		15.9	12	
76+23		1.4	8	

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
76+43		4.5	13	
76+84	5.6		6	
76+86	6.2		12	
77+06	10.6		13	
77+07		7.7	13	
77+08		8.0	12	
77+19	8.1		14	
77+20	9.1		14	
77+32	6.6		6	
77+38	5.9		6	
78+26	11.9		7	
78+30	6.2		9	
78+40		6.4	6	
78+44		8.4	8	
78+45	7.6		11	
78+65	5.9		9	
79+03		9.3	10	
79+16		5.5	9	
79+30	16.0		17	
79+56	7.9			17
79+61	8.8			17
80+68		3.3	14	
80+84	4.5		6	
81+06		0.9	12	
81+15		5.6	12	
81+27	3.1		6	
81+57		3.2	15	
81+90		6.7	12	
82+14	5.3		15	
82+26	10.9		12	
82+30	8.6		6	
82+37		3.5		16
82+61	0.2		14	
82+85	16.4		6	
82+89	15.2			18
82+92		6.5		36
83+06	1.7		8	
83+32	0.6		6	
83+42		10.3		23
83+48		23.4	15	
83+71	2.3		15	
83+79	0.7			17
83+93		3.2	12	
84+26		9.3	6	
84+29		3.1	6	
84+39		1.5	13	
84+47		13.9	8	
84+58	13.9			16
84+80	1.4		14	
84+94	6.6		6	

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
85+00				40
85+02		2.6	6	
85+05		2.2	14	
85+23		0.0	12	
85+37		9.5	8	
85+38	2.4		10	
85+41	9.6		14	
85+58	9.7		6	
85+82		0.9	13	
85+86	1.9		9	
85+86	5.9			20
86+20	8.0		6	
86+28		1.8	14	
86+31		1.8	14	
86+65	0.0			17
86+95		4.8	6	
87+59		13.3	8	
87+73	9.2		15	
87+98		0.0		16
88+15		11.1		20
90+80		13.7		16
90+81		11.1		16
90+82		12.4	14	
90+91	3.2		13	
91+02		11.0		21
91+04		9.9		16
91+61	1.0		10	
91+66	0.6		15	
91+89	5.8		6	
92+19	7.6			18
94+88		6.3	12	
95+40	11.1		15	
95+85	7.8		12	
96+41	9.4		10	
96+56	11.0			20
97+19		3.7	8	
97+31	6.9		8	
97+32	10.5		15	
97+41	7.3			20
97+50	6.9		8	
97+57	10.7			20
97+84	2.7		12	
97+97	3.6		8	
98+09	3.0		15	
99+08	4.8		6	
101+14		0.3	8	
101+21	2.8		8	
101+23	0.3		12	
101+27	2.0		6	
103+46	0.4		12	

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
103+53		5.0	6	
103+54		4.8		24
103+63	4.0			18
103+66	5.0			15
103+67	3.6		8	
103+71		0.8	8	
103+87	2.7		12	
103+99	7.9		15	
104+20		3.0	6	
104+23		3.1		16
104+29		5.6	10	
104+30	7.4		14	
104+46	8.6		13	
104+57	9.2		9	
104+59		5.0	13	
104+62	11.2		15	
104+71		6.9	10	
105+04	7.8		14	
105+09	4.1		8	
105+10	8.9		12	
105+25		4.9		42
105+34		5.6	6	
105+38	6.3		10	
105+49	7.9		7	
105+51	8.2		15	
108+25		6.4	12	
108+26		8.9		28
108+29		5.4	12	
108+32		10.5	15	
108+33		4.1	12	
108+36		11.3		18
108+37		4.2	6	
108+41		0.9	8	
108+54		8.8	12	
108+55		5.4	6	
109+48		0.0		36
112+42	1.0		8	
112+51	4.1		8	
112+64	10.2			22
118+80		11.0		28
118+84		12.0		36
118+91	10.0		12	
119+20		28.2		36
119+26		15.9	12	
119+31		12.1	15	
119+63	9.8		15	
119+64		10.9	12	
119+78		12.7		24
119+88		14.7	8	
119+92		12.0	15	

FILE NAME: D:\Cook\FPL\20130718P1\_Northern\sub\Roadway\Phase 2 Engineering\General\Schedule.dgn



USER NAME = David.Landwehr  
 PLOT SCALE = 10.0000' = 1" = 100'  
 PLOT DATE = 12/12/2014

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 SCHEDULES - TREE REMOVAL

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

F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.  
 08-F3000-21-BT COOK 129 8  
 CONTRACT NO. 61A86  
 FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT



TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
119+93		14.5	12	
120+27	13.5		12	
120+69	17.5			36
120+81	11.7		15	
121+03		9.1	12	
121+18		11.8	12	
121+22		14.6	10	
121+35		11.0	12	
121+35		5.8	12	
121+39		10.0	10	
121+89		6.2	10	
122+00	12.3		10	
122+03	13.4		10	
122+04		9.4	12	
122+13		11.9	12	
122+45		11.0	12	
122+75		10.6	6	
122+80	15.0		12	
122+86	12.3			32
122+93		13.1	12	
123+10		5.1	6	
123+13	1.1		6	
123+33	13.6		6	
123+35		7.4	12	
123+50	7.9		12	
123+64		3.9	6	
124+41		9.3		36
124+45		13.9		28
125+55	8.7		12	
125+72		2.8	10	
125+75	5.1		12	
125+91	2.2			36
126+01		11.9	15	
126+43		15.5	15	
126+68	8.7		15	
126+74	3.7		15	
126+75		13.5		32
126+96	12.1		15	
127+03	11.1			30
127+07	13.8			30
127+14	13.8			30
127+18	22.6		8	
127+38	19.0		15	
127+45	0.0	0.0		36
127+63	4.9			28
128+29		21.4	12	
137+56		2.0	10	
150+08	10.0			18
150+16		4.8	12	
150+22	12.9			18

TREE REMOVAL SCHEDULE				
STATION	OFFSET		6-15 UNITS	>15 UNITS
	LT	RT		
150+27		3.6	6	
150+36	11.9		12	
150+38		5.9	15	
150+42		11.0	15	
150+54		8.3	10	
150+59	15.0		12	
150+65		10.5	8	
150+71	11.6		12	
150+84	10.2		12	
150+85	2.2		12	
151+04		9.8	12	
151+18		11.7	10	
151+42	12.2		6	
151+69	3.7		10	
151+94	7.3		6	
151+96		19.6		60
152+25		3.7	10	
152+31	10.1		15	
152+41	4.4		6	
152+52		7.7	6	
152+65		1.2	10	
152+71	5.5		15	
152+80		12.8		18
152+85	4.1		6	
152+86		8.3	8	
152+87	20.7		10	
152+87	18.2		12	
152+95	1.6		10	
153+97	16.7			18
153+98		1.9	15	
154+09		7.3	6	
165+43		16.7		28
20% GROWTH			758	506
SUBTOTAL			4550	3037

TEMPORARY FENCE SCHEDULE			
STATION TO STATION	OFFSET	LENGTH (FT)	
23+25.00	25+95.00	LT	270
26+35.00	32+78.00	LT	643
47+73.00	51+40.00	RT	367
60+00.00	64+40.00	LT	440
81+75.00	86+15.00	RT	440
82+00.00	87+45.00	LT	545
121+00.00	122+50.00	LT	150
122+55.00	127+25.00	RT	470
<b>TOTAL:</b>			<b>3,325</b>

FILE NAME: Q:\Cook\PD\_20367281\_NorthBranchExt\Roadway\Phase 2 Engineering\General\Schedule.dgn



USER NAME: David.Landwehr  
 PLOT SCALE: 1/8"=1'-0"  
 PLOT DATE: 12/12/2014

DESIGNED: -  
 DRAWN: -  
 CHECKED: -  
 DATE: -

REVISED: -  
 REVISED: -  
 REVISED: -  
 REVISED: -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 SCHEDULES - TREE REMOVAL & TEMPORARY FENCE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	9
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SIGN INSTALLATION SCHEDULE									
STATION	RT/LT	SIGN	DESIGNATION	SIGN PANEL DIMENSIONS (IN)		TYPE A POST (EACH)	TYPE B POST (EACH)	LENGTH /POST (FT)	TOTAL LENGTH (FT)
11+35.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
11+87.00	LT	COMBINATION BIKE AND PED CROSSING	W11-15	30	30	2		14	28
		DIAGONAL ARROW	W16-17P	24	12				
EASTBOUND DEVON AVE.	RT	COMBINATION BIKE AND PED CROSSING	W11-15	36	36		2	15.5	31
		AHEAD	W16-9P	24	12				
		N Branch Trail	SPECIAL	24	6				
WESTBOUND DEVON AVE.	RT	COMBINATION BIKE AND PED CROSSING	W11-15	36	36		2	15.5	31
		AHEAD	W16-9P	24	12				
		N Branch Trail	SPECIAL	24	6				
14+30.00	RT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
37+85.00	RT	COMBINATION BIKE AND PED CROSSING	W11-15	36	36		2	15.5	31
		AHEAD	W16-9P	24	12				
		N Branch Trail	SPECIAL	24	6				
39+60.00	RT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
39+70.00	LT	COMBINATION BIKE AND PED CROSSING	W11-15	36	36		2	15	30
		DIAGONAL ARROW	W16-7P	24	12				
40+30.00	RT	COMBINATION BIKE AND PED CROSSING	W11-15	36	36		2	15	30
		DIAGONAL ARROW	W16-7P	24	12				
40+42.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
44+10.00	RT	COMBINATION BIKE AND PED CROSSING	W11-15	36	36		2	15.5	31
		AHEAD	W16-9P	24	12				
		N Branch Trail	SPECIAL	24	6				
47+30.00	RT	STOP	R1-1	18	18	1		10	10
47+35.00	LT	COMBINATION BIKE AND PED CROSSING	W11-15	30	30	2		14	28
		DIAGONAL ARROW	W16-17P	24	12				
47+78.00	RT	COMBINATION BIKE AND PED CROSSING	W11-15	30	30	2		14	28
		DIAGONAL ARROW	W16-17P	24	12				
47+90.00	LT	STOP	R1-1	18	18	1		10	10
51+45.00	RT	STOP	R1-1	18	18	1		10	10
51+50.00	LT	BICYCLE WARNING	W11-1	24	24		1	14.5	14.5
		SHARE THE ROAD	W16-1P	24	18				
51+65.00	LT	N Branch Trail	SPECIAL	24	18		2	14.25	28.5
		BIKE ROUTE	D11-1	24	18				
		BICYCLE ROUTE DIRECTION ARROW	M6-1	12	9				
51+85.00	LT	N Branch Trail	SPECIAL	24	18		2	14.25	28.5
		BIKE ROUTE	D11-1	24	18				
		BICYCLE ROUTE DIRECTION ARROW	M6-1	12	9				
56+54.00	LT	BICYCLE WARNING	W11-1	24	24		1	14.5	14.5
		SHARE THE ROAD	W16-1P	24	18				
56+80.50	RT	STOP	R1-1	18	18	1		10	10
60+30.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
82+00.00	RT	Caution: Bike Path May Flood Ahead	SPECIAL	24	18	1		10	10
89+50.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
90+00.00	LT	Caution: Bike Path May Flood Ahead	SPECIAL	24	18	1		10	10

SIGN INSTALLATION SCHEDULE									
STATION	RT/LT	SIGN	DESIGNATION	SIGN PANEL DIMENSIONS (IN)		TYPE A POST (EACH)	TYPE B POST (EACH)	LENGTH /POST (FT)	TOTAL LENGTH (FT)
94+00.00	RT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
100+95.00	RT	COMBINATION BIKE AND PED CROSSING	W11-15	30	30	2		14.5	29
		AHEAD	W16-9P	24	12				
		N Branch Trail	SPECIAL	24	6				
102+55.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
102+65.00	RT	STOP	R1-1	18	18	1		10	10
102+92.00	LT	COMBINATION BIKE AND PED CROSSING	W11-15	30	30	2		14	28
		DIAGONAL ARROW	W16-17P	24	12				
103+22.60	RT	COMBINATION BIKE AND PED CROSSING	W11-15	30	30				
		DIAGONAL ARROW	W16-17P	24	12				
		COMBINATION BIKE AND PED CROSSING	W11-15	30	30				
		AHEAD	W16-9P	24	12				
		N Branch Trail	SPECIAL	24	6				
103+49.00	LT	STOP	R1-1	18	18	1		10	10
103+55.00	RT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
105+00.00	RT	Caution: Bike Path May Flood Ahead	SPECIAL	24	18	1		10	10
108+10.00	RT	HILL	W7-5	18	18	1		10	10
135+00.00	LT	Caution: Bike Path May Flood Ahead	SPECIAL	24	18	1		10	10
137+75.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
138+23.00	RT	STOP	R1-1	18	18	1		10	10
138+87.00	LT	STOP	R1-1	18	18	1		10	10
139+30.00	RT	COMBINATION BIKE AND PED CROSSING	W11-15	30	30	2		14	28
		AHEAD	W16-9P	24	12				
139+66.00	RT	STOP	R1-1	18	18	1		10	10
140+34.00	LT	STOP	R1-1	18	18	1		10	10
140+50.00	RT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
148+94.00	RT	STOP	R1-1	18	18	1		10	10
149+44.00	LT	STOP	R1-1	18	18	1		10	10
153+30.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
153+80.00	RT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
165+95.00	LT	N Branch Trail	SPECIAL	24	18		1	12	12
		BIKE ROUTE	D11-1	24	18				
166+10.00	RT	STOP	R1-1	18	18		1	11	11
		NO MOTOR VEHICLES	R5-3	24	24				

North Branch Bicycle Trail Tree Planting		
Species	Common Name	Quantity
Quercus alba	White Oak	25
Quercus bicolor	Swamp White Oak	15
Quercus macrocarpa	Burr Oak	20
Quercus rubra	Red Oak	15
Acer rubrum	Red Maple	20
Taxodium distichum	Bald Cypress	15
Celtis occidentalis	Hackberry	20
Tilia americana	Linden	20
<b>TOTAL</b>		<b>150</b>

LOCATIONS OF TREES TO BE DETERMINED IN FIELD BY THE ENGINEER

Location	Existing panels to be replaced		New panels, frames & install	
	Full Size 4' x 6'	Half Size 2' x 3'	Full Size 4' x 6'	Half Size 2' x 3'
Irene Hernandez			X	
La Bagh Woods			X	
Indian Road Woods			X	
Devon			X	
Bunker Hill	X			
Caldwell Wood			X	
Miami Woods			X	
Linne Woods	X			
Harms Woods	X			
Blue Star			X	
Happ Road			X	
Tower Road	X			
Dundee			X	
Lake Cook Road			X	
<b>TOTAL</b>	<b>4</b>		<b>10</b>	

EARTHWORK SCHEDULE										
STATION	TO STATION	EARTH EXCAVATION CU YD	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (25%) CU YD	EMBANKMENT CU YD	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) FURNISHED EXCAVATION CU YD	UNSUITABLE EXCAVATION (REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL) CU YD	UNSUITABLE MATERIAL ADJUSTED FOR SHRINKAGE (25%) CU YD	TOPSOIL FURNISH AND PLACE, 6" CU YD	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (UNSUITABLE MATERIAL) CU YD	
1	10+00.00	40+00.00	13	10	1,176	-1,166	1,655	1,241	429	813
2	40+00.00	70+00.00	27	20	973	-953	1,040	780	281	498
3	70+00.00	117+00.00	754	565	4,613	-4,048	3,503	2,627	1,124	1,503
4	117+00.00	166+00.00	795	596	3,058	-2,461	3,807	2,855	1,051	1,804
MWRD ACCESS DRIVE	500+00.00	504+09.68	0	0	30	-30	107	80	76	4
<b>TOTAL:</b>			<b>1,589</b>	<b>1,192</b>	<b>9,850</b>	<b>-8,658</b>	<b>10,112</b>	<b>7,584</b>	<b>2,961</b>	<b>4,623</b>

FILE NAME: \\ch\cook\pp\20362389\_NorthBranchBikeTrailExtension\Phase 2\_Engineering\General\Schedule.scdgn



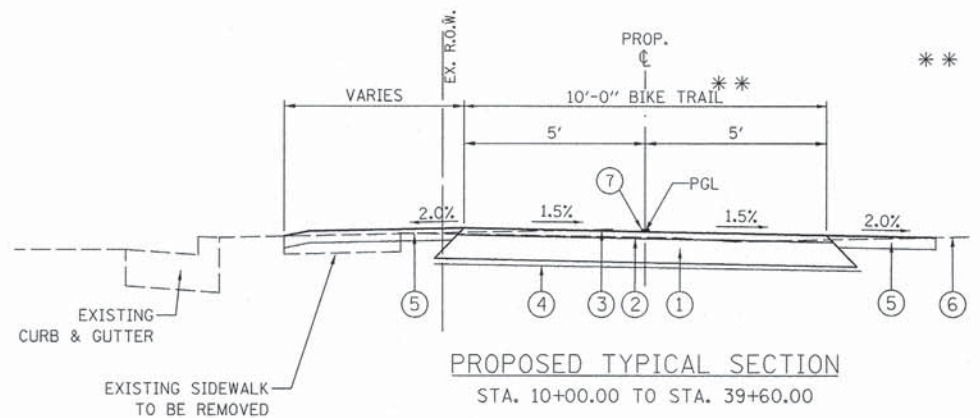
USER NAME: David.Landowner	DESIGNED: -	REVISED: -
PLOT SCALE: 1/8" = 1'-0"	DRAWN: -	REVISED: -
PLOT DATE: 12/12/2014	CHECKED: -	REVISED: -
	DATE: -	REVISED: -

**STATE OF ILLINOIS**  
DEPARTMENT OF TRANSPORTATION

**NORTH BRANCH BIKE TRAIL EXTENSION**  
**SCHEDULES - EARTHWORK, SIGN INSTALLATION, & TREES**

SCALE: SHEET NO. OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	10
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 61A86	



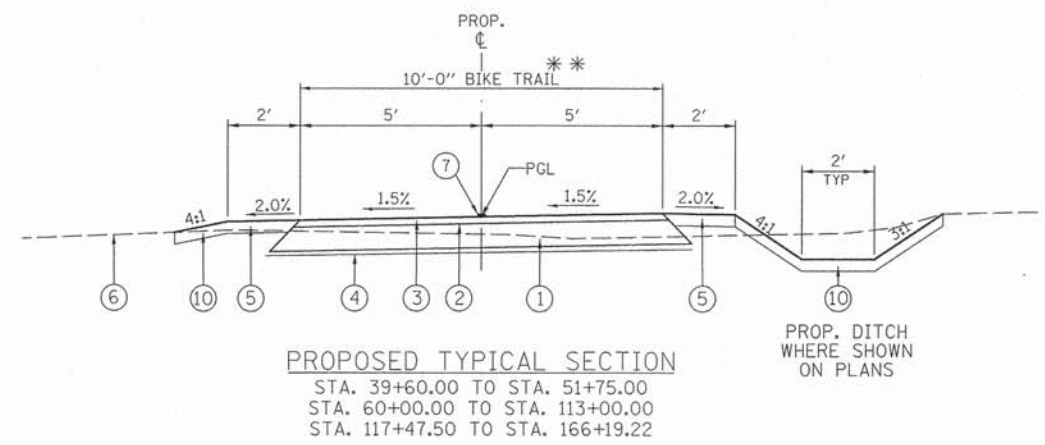
\*\* LIMIT OF PAYMENT FOR ASPHALT, BITUMINOUS MATERIAL, AND AGGREGATE BASES

**NOTE 1:**  
WHERE UNSUITABLE MATERIAL UNDERLIES THE BIKE TRAIL, SHOULDERS AND/OR EMBANKMENT, AS DETERMINED BY THE ENGINEER, THE SUBGRADE TREATMENT WILL CONSIST OF EXCAVATION OF SUCH UNSUITABLE MATERIAL TO A DEPTH 12" BELOW AGGREGATE BASE COURSE AND PLACEMENT OF 12" OF AGGREGATE SUBGRADE IMPROVEMENT AND A GEOTECHNICAL FABRIC FOR GROUND STABILIZATION.

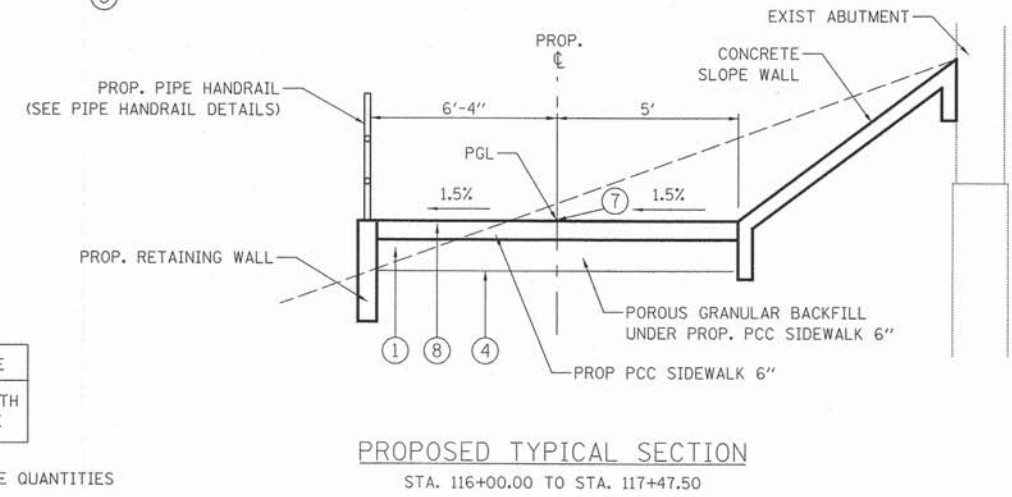
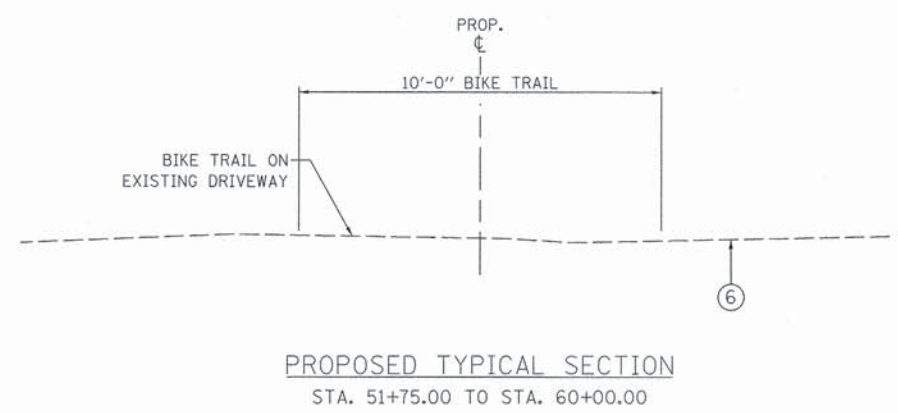
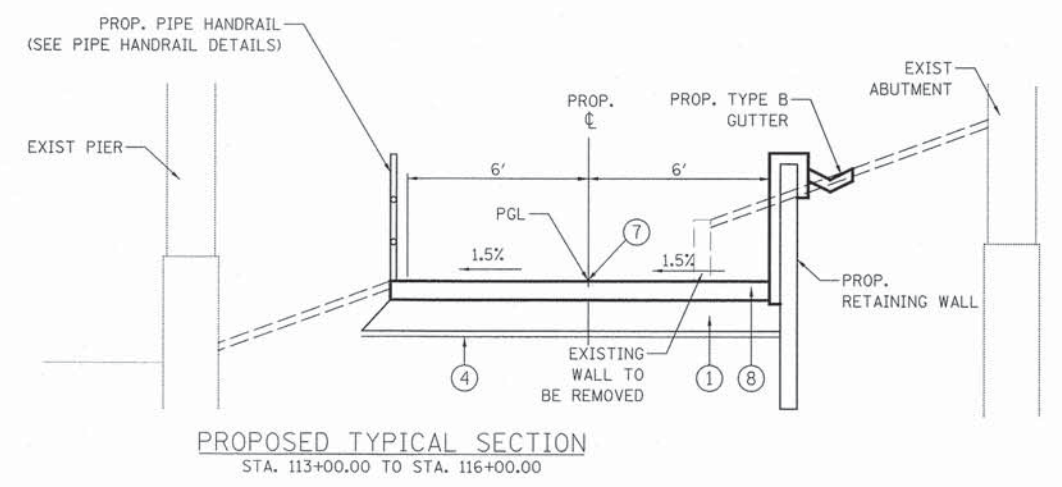
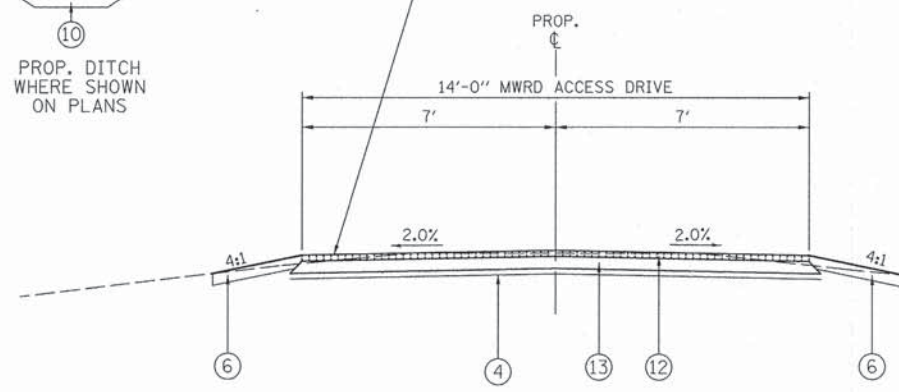
**NOTE 2:**  
ADDITIONAL FILL MATERIAL TO BE PLACED ABOVE FABRIC IN CUT SECTIONS SHALL NOT BE MEASURED FOR PAYMENT. MATERIAL SHALL BE SUITABLE EMBANKMENT MATERIAL.

**NOTE 3:**  
AT ALL INTERSECTIONS OF BIKE PATH AND ROADWAYS, DEPRESS THE CURB (IF APPLICABLE) AND MAINTAIN EXISTING PAVEMENT ELEVATIONS.

- LEGEND:**
- ① AGGREGATE BASE COURSE, TYPE B, 6"
  - ② BITUMINOUS MATERIALS (PRIME COAT)
  - ③ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2"
  - ④ GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
  - ⑤ TOPSOIL FURNISH AND PLACE, 6", AND SEEDING, CLASS 1B
  - ⑥ EXISTING GROUND
  - ⑦ PAINT PAVEMENT MARKING, 4" YELLOW
  - ⑧ PCC SIDEWALK 6"
  - ⑨ INTERLOCKING CONCRETE PAVERS
  - ⑩ TOPSOIL FURNISH AND PLACE, 6", AND SEEDING, CLASS 4A
  - ⑪ PORTLAND CEMENT CONCRETE CURB
  - ⑫ GRID PAVING SYSTEM, 2" (PAID FOR AS GRASS PAVERS)
  - ⑬ BASE COURSE AGGREGATE, 4"



GRASS PAVERS (COST INCLUDES GRID PAVING SYSTEM, 2"; FILLING IN PAVING SYSTEM WITH TOPSOIL (2") & SPREAD SEEDING, CLASS 1B)



**BITUMINOUS MIXTURE REQUIREMENTS**

ITEM	VOIDS	USAGE
HOT-MIX ASPHALT SURFACE COURSE, MIX. D, N50 (IL 9.5 mm; 2")	4% @ 50 GYRE	BIKE PATH SURFACE

THE UNIT WEIGHT USED TO CALCULATE ALL BITUMINOUS MIXTURE QUANTITIES IS 112 LBS/SQ. YD./IN.  
THE AC TYPE SHALL BE PG-64-22 UNLESS MODIFIED BY SPECIAL PROVISIONS FOR USE OF RECYCLED MATERIALS, SPECIAL PROVISIONS

FILE NAME = G:\Cook\FD\28387854\_NorthBranchExt\Roadway\Phase 2\_Engineering\TypicalSection\Prop.typ\_section.dgn



USER NAME = David.Landwehr	DESIGNED - PMV	REVISED -
PLOT SCALE = 5/8"=1'-0"	DRAWN - PMV	REVISED -
PLOT DATE = 12/12/2014	CHECKED - NPP	REVISED -
	DATE - 10/20/14	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION PROPOSED TYPICAL SECTIONS			
SCALE: NONE	SHEET NO. OF SHEETS	STA. TO STA.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	11
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

PROP. CURVE NBRNPH2-1  
 PI STA. = 10+18.71  
 $\Delta = 21^\circ 11' 49''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 18.71'  
 L = 37.00'  
 E = 1.74'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 10+00.00  
 P.T. STA. = 10+37.00

PROP. CURVE NBRNPH2-2  
 PI STA. = 10+70.47  
 $\Delta = 22^\circ 01' 45''$  (LT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 19.46'  
 L = 38.45'  
 E = 1.88'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 10+51.01  
 P.T. STA. = 10+89.46

PROP. CURVE NBRNPH2-3  
 PI STA. = 11+27.89  
 $\Delta = 25^\circ 22' 35''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 22.51'  
 L = 44.29'  
 E = 2.50'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 11+05.38  
 P.T. STA. = 11+49.67

PROP. CURVE NBRNPH2-4  
 PI STA. = 17+82.31  
 $\Delta = 34^\circ 01' 09''$  (RT)  
 D = 38° 11' 50"  
 R = 150.00'  
 T = 45.89'  
 L = 89.06'  
 E = 6.86'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 17+36.42  
 P.T. STA. = 18+25.48

PROP. CURVE NBRNPH2-5  
 PI STA. = 19+17.42  
 $\Delta = 6^\circ 58' 33''$  (RT)  
 D = 28° 38' 52"  
 R = 200.00'  
 T = 12.19'  
 L = 24.35'  
 E = 0.37'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 19+05.23  
 P.T. STA. = 19+29.58

PROP. CURVE NBRNPH2-6  
 PI STA. = 19+94.54  
 $\Delta = 33^\circ 17' 15''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 29.89'  
 L = 58.10'  
 E = 4.37'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 19+64.65  
 P.T. STA. = 20+22.75

PROP. CURVE NBRNPH2-7  
 PI STA. = 21+17.32  
 $\Delta = 80^\circ 38' 20''$  (LT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 84.86'  
 L = 140.74'  
 E = 31.16'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 20+32.46  
 P.T. STA. = 21+73.20

PROP. CURVE NBRNPH2-8  
 PI STA. = 22+16.94  
 $\Delta = 40^\circ 23' 14''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 36.78'  
 L = 70.49'  
 E = 6.55'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 21+80.16  
 P.T. STA. = 22+50.65

PROP. CURVE NBRNPH2-9  
 PI STA. = 23+01.95  
 $\Delta = 35^\circ 14' 52''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 31.77'  
 L = 61.52'  
 E = 4.92'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 22+70.18  
 P.T. STA. = 23+31.70

PROP. CURVE NBRNPH2-10  
 PI STA. = 25+17.93  
 $\Delta = 28^\circ 53' 54''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 25.77'  
 L = 50.44'  
 E = 3.27'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 24+92.17  
 P.T. STA. = 25+42.60

PROP. CURVE NBRNPH2-11  
 PI STA. = 25+67.06  
 $\Delta = 27^\circ 28' 58''$  (LT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 24.45'  
 L = 47.97'  
 E = 2.95'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 25+42.60  
 P.T. STA. = 25+90.57

PROP. CURVE NBRNPH2-12  
 PI STA. = 26+95.14  
 $\Delta = 23^\circ 02' 29''$  (LT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 20.38'  
 L = 40.21'  
 E = 2.06'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 26+74.76  
 P.T. STA. = 27+14.97

PROP. CURVE NBRNPH2-13  
 PI STA. = 27+61.83  
 $\Delta = 50^\circ 12' 48''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 46.86'  
 L = 87.64'  
 E = 10.43'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 27+14.97  
 P.T. STA. = 28+02.61

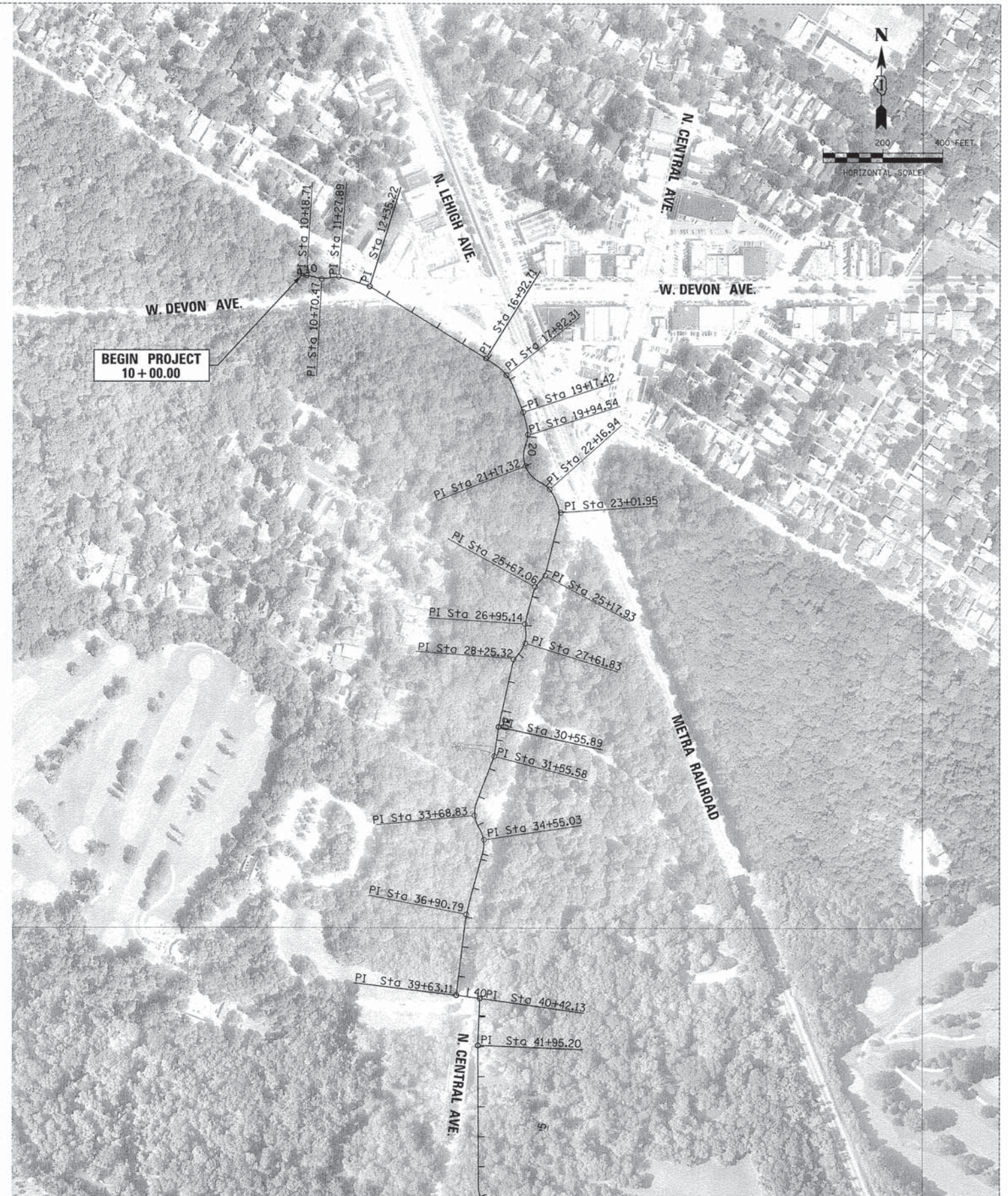
PROP. CURVE NBRNPH2-14  
 PI STA. = 28+25.32  
 $\Delta = 29^\circ 55' 08''$  (LT)  
 D = 67° 24' 24"  
 R = 85.00'  
 T = 22.71'  
 L = 44.39'  
 E = 2.98'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 28+02.61  
 P.T. STA. = 28+47.00

PROP. CURVE NBRNPH2-15  
 PI STA. = 31+55.58  
 $\Delta = 12^\circ 26' 30''$  (RT)  
 D = 38° 11' 50"  
 R = 150.00'  
 T = 16.35'  
 L = 32.57'  
 E = 0.89'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 31+39.23  
 P.T. STA. = 31+71.81

PROP. CURVE NBRNPH2-16  
 PI STA. = 33+68.83  
 $\Delta = 52^\circ 56' 58''$  (LT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 49.80'  
 L = 92.41'  
 E = 11.72'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 33+19.03  
 P.T. STA. = 34+11.44

PROP. CURVE NBRNPH2-16A  
 PI STA. = 34+55.03  
 $\Delta = 47^\circ 06' 25''$  (RT)  
 D = 57° 17' 45"  
 R = 100.00'  
 T = 43.59'  
 L = 82.22'  
 E = 9.09'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 34+11.44  
 P.T. STA. = 34+93.66

PROP. CURVE NBRNPH2-17  
 PI STA. = 36+90.79  
 $\Delta = 8^\circ 14' 07''$  (LT)  
 D = 7° 09' 43"  
 R = 800.00'  
 T = 57.59'  
 L = 114.98'  
 E = 2.07'  
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 36+33.20  
 P.T. STA. = 37+48.19



FILE NAME: G:\Cook\FPD\_20357381\NorthBranchBikeTrail\Phase 2 Engineering\Drawings\1021-41\1021-41.dwg



USER NAME: David.Landwehr  
 PLOT SCALE = 200.0000' / 1" = 200'  
 PLOT DATE = 12/12/2014

DESIGNED - -  
 DRAWN - -  
 CHECKED - -  
 DATE - -

REVISED - -  
 REVISED - -  
 REVISED - -  
 REVISED - -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 ALIGNMENT, TIES, & BENCHMARKS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	12
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PROP. CURVE NBRNP2-18  
PI STA. = 47+24.57  
Δ = 62° 10' 17" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 60.29'  
L = 108.51'  
E = 16.77'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 46+64.28  
P.T. STA. = 47+72.79



PROP. CURVE NBRNP2-48  
PI STA. = 91+05.31  
Δ = 28° 53' 10" (RT)  
D = 38° 11' 50"  
R = 150.00'  
T = 38.63'  
L = 75.62'  
E = 4.90'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 90+66.68  
P.T. STA. = 91+42.30

PROP. CURVE NBRNP2-49  
PI STA. = 91+89.84  
Δ = 12° 05' 44" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 10.59'  
L = 21.11'  
E = 0.56'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 91+79.24  
P.T. STA. = 92+00.35

PROP. CURVE NBRNP2-50  
PI STA. = 92+56.60  
Δ = 25° 00' 03" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 22.17'  
L = 43.63'  
E = 2.43'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 92+34.43  
P.T. STA. = 92+78.06

PROP. CURVE NBRNP2-51  
PI STA. = 94+58.19  
Δ = 89° 14' 40" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 98.69'  
L = 155.76'  
E = 40.50'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 93+59.50  
P.T. STA. = 95+15.26

PROP. CURVE NBRNP2-52  
PI STA. = 104+44.29  
Δ = 26° 55' 05" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 23.93'  
L = 46.98'  
E = 2.82'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 104+20.36  
P.T. STA. = 104+67.34

PROP. CURVE NBRNP2-53  
PI STA. = 104+83.93  
Δ = 18° 50' 51" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 16.60'  
L = 32.90'  
E = 1.37'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 104+67.34  
P.T. STA. = 105+00.23

PROP. CURVE NBRNP2-19  
PI STA. = 48+54.83  
Δ = 30° 43' 21" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 27.47'  
L = 53.62'  
E = 3.70'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 48+27.36  
P.T. STA. = 48+80.98

PROP. CURVE NBRNP2-20  
PI STA. = 49+04.05  
Δ = 25° 58' 40" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 23.07'  
L = 45.34'  
E = 2.63'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 48+80.98  
P.T. STA. = 49+26.32

PROP. CURVE NBRNP2-21  
PI STA. = 50+79.63  
Δ = 31° 40' 00" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 28.36'  
L = 55.27'  
E = 3.94'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 50+51.27  
P.T. STA. = 51+06.54

PROP. CURVE NBRNP2-22  
PI STA. = 51+18.69  
Δ = 13° 50' 59" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 12.15'  
L = 24.17'  
E = 0.73'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 51+06.54  
P.T. STA. = 51+30.72

PROP. CURVE NBRNP2-23  
PI STA. = 51+47.64  
Δ = 19° 12' 43" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 16.92'  
L = 33.53'  
E = 1.42'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 51+30.72  
P.T. STA. = 51+64.25

PROP. CURVE NBRNP2-24  
PI STA. = 53+52.52  
Δ = 114° 58' 27" (LT)  
D = 47° 44' 47"  
R = 120.00'  
T = 188.27'  
L = 240.80'  
E = 103.26'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 51+64.25  
P.T. STA. = 54+05.05

PROP. CURVE NBRNP2-25  
PI STA. = 55+11.84  
Δ = 4° 23' 55" (LT)  
D = 28° 38' 52"  
R = 200.00'  
T = 7.68'  
L = 15.35'  
E = 0.15'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 55+04.15  
P.T. STA. = 55+19.51

PROP. CURVE NBRNP2-26  
PI STA. = 55+99.89  
Δ = 16° 12' 02" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 14.23'  
L = 28.28'  
E = 1.01'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 55+85.66  
P.T. STA. = 56+13.93

PROP. CURVE NBRNP2-27  
PI STA. = 55+18.69  
Δ = 13° 50' 59" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 12.15'  
L = 24.17'  
E = 0.73'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 51+06.54  
P.T. STA. = 51+30.72

PROP. CURVE NBRNP2-28  
PI STA. = 60+09.44  
Δ = 18° 01' 51" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 15.87'  
L = 31.47'  
E = 1.25'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 59+93.57  
P.T. STA. = 60+25.04

PROP. CURVE NBRNP2-29  
PI STA. = 62+74.42  
Δ = 18° 11' 42" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 17.49'  
L = 34.64'  
E = 1.52'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 60+25.04  
P.T. STA. = 60+59.68

PROP. CURVE NBRNP2-30  
PI STA. = 63+06.16  
Δ = 18° 11' 04" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 16.01'  
L = 31.74'  
E = 1.27'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 62+90.17  
P.T. STA. = 63+21.89

PROP. CURVE NBRNP2-31  
PI STA. = 64+56.83  
Δ = 18° 11' 04" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 16.00'  
L = 31.74'  
E = 1.27'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 64+40.83  
P.T. STA. = 64+72.57

PROP. CURVE NBRNP2-32  
PI STA. = 64+88.57  
Δ = 18° 11' 04" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 16.00'  
L = 31.74'  
E = 1.27'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 64+72.57  
P.T. STA. = 65+04.31

PROP. CURVE NBRNP2-33  
PI STA. = 75+52.96  
Δ = 12° 05' 33" (RT)  
D = 25° 27' 53"  
R = 225.00'  
T = 23.83'  
L = 47.49'  
E = 1.26'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 75+29.13  
P.T. STA. = 75+76.61

PROP. CURVE NBRNP2-34  
PI STA. = 76+42.28  
Δ = 48° 19' 17" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 100.00'  
L = 84.34'  
E = 9.60'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 75+97.42  
P.T. STA. = 76+81.76

PROP. CURVE NBRNP2-35  
PI STA. = 77+76.55  
Δ = 15° 37' 33" (RT)  
D = 38° 11' 50"  
R = 150.00'  
T = 19.99'  
L = 40.91'  
E = 1.41'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 77+55.97  
P.T. STA. = 77+96.88

PROP. CURVE NBRNP2-36  
PI STA. = 78+50.53  
Δ = 22° 36' 15" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 12.82'  
L = 25.50'  
E = 0.82'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 78+30.54  
P.T. STA. = 78+69.99

PROP. CURVE NBRNP2-37  
PI STA. = 79+32.60  
Δ = 14° 36' 40" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 7.17'  
L = 14.32'  
E = 0.26'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 79+19.78  
P.T. STA. = 79+45.28

PROP. CURVE NBRNP2-38  
PI STA. = 79+95.40  
Δ = 53° 14' 30" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 50.12'  
L = 92.92'  
E = 11.86'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 79+45.28  
P.T. STA. = 80+38.20

PROP. CURVE NBRNP2-39  
PI STA. = 80+71.11  
Δ = 36° 25' 57" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 32.91'  
L = 63.59'  
E = 5.28'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 80+38.20  
P.T. STA. = 81+01.79

PROP. CURVE NBRNP2-40  
PI STA. = 81+82.02  
Δ = 16° 55' 52" (LT)  
D = 38° 11' 50"  
R = 150.00'  
T = 22.33'  
L = 44.33'  
E = 1.65'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 81+59.69  
P.T. STA. = 82+04.02

PROP. CURVE NBRNP2-41  
PI STA. = 83+22.40  
Δ = 24° 54' 57" (LT)  
D = 38° 11' 50"  
R = 150.00'  
T = 33.14'  
L = 65.23'  
E = 3.62'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 82+89.26  
P.T. STA. = 83+54.49

PROP. CURVE NBRNP2-42  
PI STA. = 84+29.09  
Δ = 52° 53' 12" (RT)  
D = 38° 11' 50"  
R = 150.00'  
T = 74.60'  
L = 138.46'  
E = 17.53'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 83+54.49  
P.T. STA. = 84+92.95

PROP. CURVE NBRNP2-43  
PI STA. = 85+00.12  
Δ = 8° 12' 09" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 7.17'  
L = 14.32'  
E = 0.26'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 84+92.95  
P.T. STA. = 85+07.26

PROP. CURVE NBRNP2-44  
PI STA. = 85+83.41  
Δ = 55° 07' 17" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 52.19'  
L = 96.20'  
E = 12.80'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 85+31.22  
P.T. STA. = 86+27.43

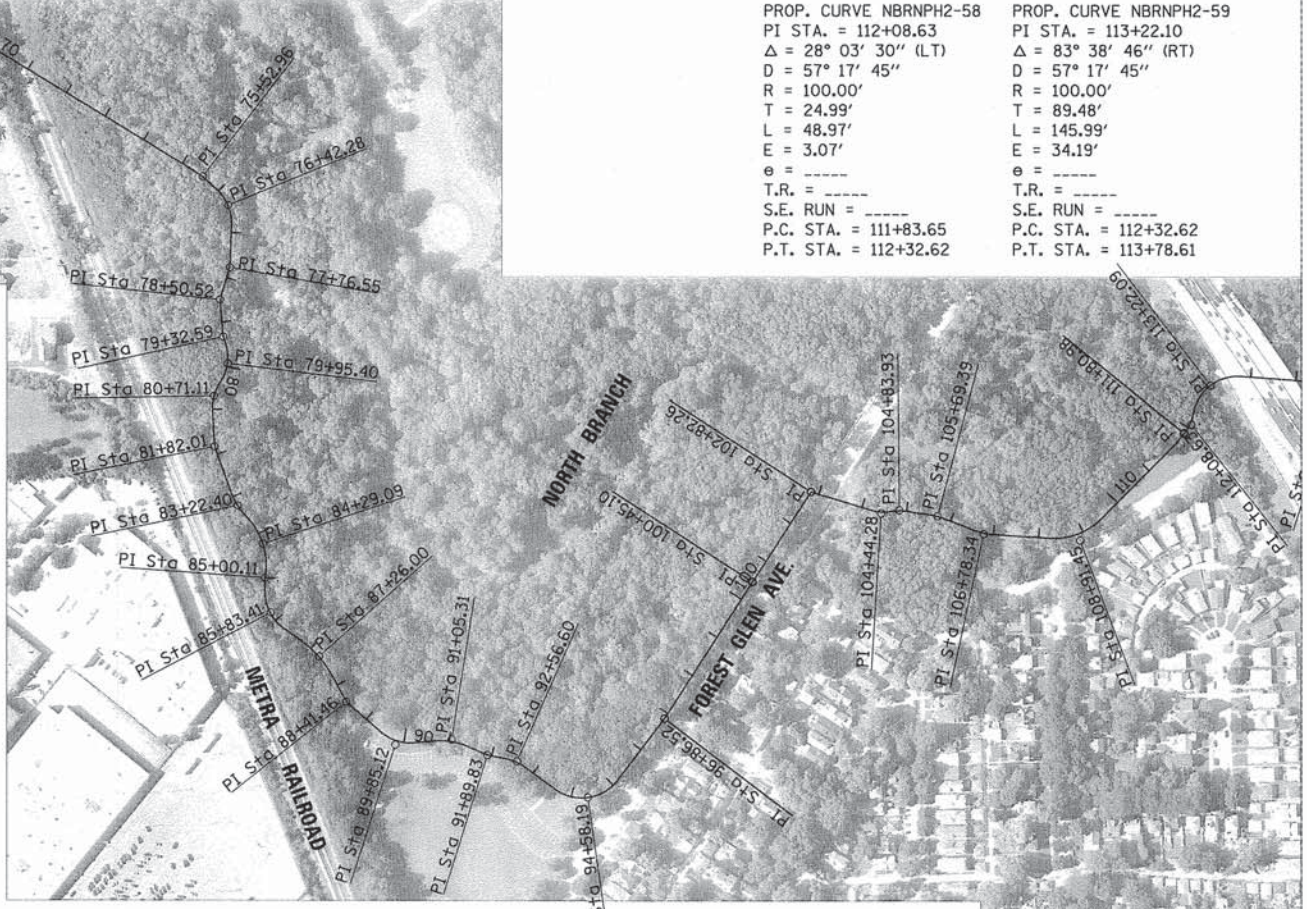
PROP. CURVE NBRNP2-45  
PI STA. = 87+26.00  
Δ = 27° 04' 19" (RT)  
D = 22° 55' 06"  
R = 250.00'  
T = 60.19'  
L = 118.12'  
E = 7.14'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 86+65.82  
P.T. STA. = 87+83.94

PROP. CURVE NBRNP2-46  
PI STA. = 88+41.46  
Δ = 20° 47' 55" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 18.35'  
L = 36.30'  
E = 1.67'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 88+23.11  
P.T. STA. = 88+59.41

PROP. CURVE NBRNP2-47  
PI STA. = 89+85.13  
Δ = 46° 27' 03" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 42.91'  
L = 81.07'  
E = 8.82'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 89+42.21  
P.T. STA. = 90+23.29

PROP. CURVE NBRNP2-48  
PI STA. = 112+08.63  
Δ = 28° 03' 30" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 24.99'  
L = 48.97'  
E = 3.07'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 111+83.65  
P.T. STA. = 112+32.62

PROP. CURVE NBRNP2-49  
PI STA. = 113+22.10  
Δ = 83° 38' 46" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 89.48'  
L = 145.99'  
E = 34.19'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 112+32.62  
P.T. STA. = 113+78.61



PROP. CURVE NBRNP2-48  
PI STA. = 91+05.31  
Δ = 28° 53' 10" (RT)  
D = 38° 11' 50"  
R = 150.00'  
T = 38.63'  
L = 75.62'  
E = 4.90'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 90+66.68  
P.T. STA. = 91+42.30

PROP. CURVE NBRNP2-49  
PI STA. = 91+89.84  
Δ = 12° 05' 44" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 10.59'  
L = 21.11'  
E = 0.56'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 91+79.24  
P.T. STA. = 92+00.35

PROP. CURVE NBRNP2-50  
PI STA. = 92+56.60  
Δ = 25° 00' 03" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 22.17'  
L = 43.63'  
E = 2.43'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 92+34.43  
P.T. STA. = 92+78.06

PROP. CURVE NBRNP2-51  
PI STA. = 94+58.19  
Δ = 89° 14' 40" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 98.69'  
L = 155.76'  
E = 40.50'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 93+59.50  
P.T. STA. = 95+15.26

PROP. CURVE NBRNP2-52  
PI STA. = 104+44.29  
Δ = 26° 55' 05" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 23.93'  
L = 46.98'  
E = 2.82'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 104+20.36  
P.T. STA. = 104+67.34

PROP. CURVE NBRNP2-53  
PI STA. = 104+83.93  
Δ = 18° 50' 51" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 16.60'  
L = 32.90'  
E = 1.37'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 104+67.34  
P.T. STA. = 105+00.23

PROP. CURVE NBRNP2-19  
PI STA. = 48+54.83  
Δ = 30° 43' 21" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 27.47'  
L = 53.62'  
E = 3.70'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 48+27.36  
P.T. STA. = 48+80.98

PROP. CURVE NBRNP2-20  
PI STA. = 49+04.05  
Δ = 25° 58' 40" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 23.07'  
L = 45.34'  
E = 2.63'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 48+80.98  
P.T. STA. = 49+26.32

PROP. CURVE NBRNP2-21  
PI STA. = 50+79.63  
Δ = 31° 40' 00" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 28.36'  
L = 55.27'  
E = 3.94'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 50+51.27  
P.T. STA. = 51+06.54

PROP. CURVE NBRNP2-22  
PI STA. = 51+18.69  
Δ = 13° 50' 59" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 12.15'  
L = 24.17'  
E = 0.73'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 51+06.54  
P.T. STA. = 51+30.72

PROP. CURVE NBRNP2-23  
PI STA. = 51+47.64  
Δ = 19° 12' 43" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 16.92'  
L = 33.53'  
E = 1.42'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 51+30.72  
P.T. STA. = 51+64.25

PROP. CURVE NBRNP2-24  
PI STA. = 53+52.52  
Δ = 114° 58' 27" (LT)  
D = 47° 44' 47"  
R = 120.00'  
T = 188.27'  
L = 240.80'  
E = 103.26'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 51+64.25  
P.T. STA. = 54+05.05

PROP. CURVE NBRNP2-33  
PI STA. = 75+52.96  
Δ = 12° 05' 33" (RT)  
D = 25° 27' 53"  
R = 225.00'  
T = 23.83'  
L = 47.49'  
E = 1.26'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 75+29.13  
P.T. STA. = 75+76.61

PROP. CURVE NBRNP2-34  
PI STA. = 76+42.28  
Δ = 48° 19' 17" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 100.00'  
L = 84.34'  
E = 9.60'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 75+97.42  
P.T. STA. = 76+81.76

PROP. CURVE NBRNP2-35  
PI STA. = 77+76.55  
Δ = 15° 37' 33" (RT)  
D = 38° 11' 50"  
R = 150.00'  
T = 19.99'  
L = 40.91'  
E = 1.41'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 77+55.97  
P.T. STA. = 77+96.88

PROP. CURVE NBRNP2-36  
PI STA. = 78+50.53  
Δ = 22° 36' 15" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 12.82'  
L = 25.50'  
E = 0.82'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 78+30.54  
P.T. STA. = 78+69.99

PROP. CURVE NBRNP2-37  
PI STA. = 79+32.60  
Δ = 14° 36' 40" (LT)  
D = 57° 17' 45"  
R = 100.00'  
T = 7.17'  
L = 14.32'  
E = 0.26'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 79+19.78  
P.T. STA. = 79+45.28

PROP. CURVE NBRNP2-38  
PI STA. = 79+95.40  
Δ = 53° 14' 30" (RT)  
D = 57° 17' 45"  
R = 100.00'  
T = 50.12'  
L = 92.92'  
E = 11.86'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 79+45.28  
P.T. STA. = 80+38.20

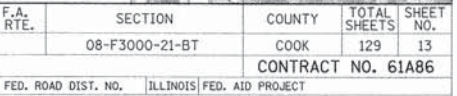
UR  
300 SOUTH MAIN STREET, SUITE 300  
CHICAGO, IL 60606 (312) 939-3000

USER NAME = David.Landweaver	DESIGNED	REVISED
PLOT SCALE = 2000.0000 X 1/4" = 1'	DRAWN	REVISED
PLOT DATE = 12/12/2014	CHECKED	REVISED
	DATE	REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
SCALE:	SHEET NO.	OF SHEETS

NORTH BRANCH BIKE TRAIL EXTENSION ALIGNMENT, TIES, & BENCHMARKS		
STA.	TO STA.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	13
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			





<p>PROP. CURVE NBRNP2-60 PI STA. = 115+97.71 <math>\Delta = 31^\circ 04' 13''</math> (LT) D = 57° 17' 45" R = 100.00' T = 27.80' L = 54.23' E = 3.79' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 115+69.91 P.T. STA. = 116+24.14</p>	<p>PROP. CURVE NBRNP2-61 PI STA. = 116+46.56 <math>\Delta = 25^\circ 16' 23''</math> (RT) D = 57° 17' 45" R = 100.00' T = 22.42' L = 44.11' E = 2.48' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 116+24.14 P.T. STA. = 116+68.25</p>	<p>PROP. CURVE NBRNP2-62 PI STA. = 117+49.04 <math>\Delta = 41^\circ 29' 27''</math> (RT) D = 57° 17' 45" R = 100.00' T = 37.88' L = 72.42' E = 6.93' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 117+11.16 P.T. STA. = 117+83.57</p>	<p>PROP. CURVE NBRNP2-63 PI STA. = 118+72.53 <math>\Delta = 14^\circ 05' 43''</math> (RT) D = 57° 17' 45" R = 100.00' T = 12.36' L = 24.60' E = 0.76' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 118+60.17 P.T. STA. = 118+84.77</p>	<p>PROP. CURVE NBRNP2-64 PI STA. = 119+84.83 <math>\Delta = 22^\circ 17' 49''</math> (RT) D = 57° 17' 45" R = 100.00' T = 19.71' L = 38.92' E = 1.92' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 119+65.12 P.T. STA. = 120+04.04</p>	<p>PROP. CURVE NBRNP2-65 PI STA. = 120+19.61 <math>\Delta = 17^\circ 42' 29''</math> (LT) D = 57° 17' 45" R = 100.00' T = 15.58' L = 30.91' E = 1.21' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 120+04.04 P.T. STA. = 120+34.94</p>	<p>PROP. CURVE NBRNP2-66 PI STA. = 120+40.57 <math>\Delta = 6^\circ 26' 22''</math> (RT) D = 57° 17' 45" R = 100.00' T = 5.63' L = 11.24' E = 0.16' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 120+34.94 P.T. STA. = 120+46.18</p>	<p>PROP. CURVE NBRNP2-67 PI STA. = 120+55.19 <math>\Delta = 10^\circ 17' 50''</math> (LT) D = 57° 17' 45" R = 100.00' T = 9.01' L = 17.97' E = 0.41' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 120+46.18 P.T. STA. = 120+64.15</p>	<p>PROP. CURVE NBRNP2-68 PI STA. = 121+17.59 <math>\Delta = 56^\circ 14' 26''</math> (RT) D = 57° 17' 45" R = 100.00' T = 53.44' L = 98.16' E = 13.38' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 120+64.15 P.T. STA. = 121+62.31</p>												
<p>PROP. CURVE NBRNP2-69 PI STA. = 121+83.13 <math>\Delta = 23^\circ 31' 10''</math> (LT) D = 57° 17' 45" R = 100.00' T = 20.82' L = 41.05' E = 2.14' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 121+62.31 P.T. STA. = 122+03.36</p>	<p>PROP. CURVE NBRNP2-70 PI STA. = 122+58.66 <math>\Delta = 23^\circ 35' 56''</math> (LT) D = 57° 17' 45" R = 100.00' T = 20.89' L = 41.19' E = 2.16' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 122+37.77 P.T. STA. = 122+78.96</p>	<p>PROP. CURVE NBRNP2-71 PI STA. = 123+61.98 <math>\Delta = 31^\circ 40' 52''</math> (LT) D = 57° 17' 45" R = 100.00' T = 28.37' L = 55.29' E = 3.95' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 123+33.61 P.T. STA. = 123+88.90</p>	<p>PROP. CURVE NBRNP2-72 PI STA. = 124+03.99 <math>\Delta = 17^\circ 09' 22''</math> (RT) D = 57° 17' 45" R = 100.00' T = 15.08' L = 29.94' E = 1.13' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 123+88.90 P.T. STA. = 124+18.84</p>	<p>PROP. CURVE NBRNP2-73 PI STA. = 124+80.58 <math>\Delta = 26^\circ 02' 27''</math> (LT) D = 25° 27' 53" R = 100.00' T = 52.03' L = 102.26' E = 5.94' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 124+28.55 P.T. STA. = 125+30.81</p>	<p>PROP. CURVE NBRNP2-74 PI STA. = 126+18.12 <math>\Delta = 82^\circ 14' 52''</math> (RT) D = 57° 17' 45" R = 100.00' T = 87.31' L = 143.55' E = 32.75' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 125+30.81 P.T. STA. = 126+74.36</p>	<p>PROP. CURVE NBRNP2-75 PI STA. = 127+62.96 <math>\Delta = 46^\circ 29' 19''</math> (LT) D = 57° 17' 45" R = 100.00' T = 42.95' L = 81.14' E = 8.83' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 127+20.00 P.T. STA. = 128+01.14</p>	<p>PROP. CURVE NBRNP2-76 PI STA. = 128+28.05 <math>\Delta = 30^\circ 07' 32''</math> (RT) D = 57° 17' 45" R = 100.00' T = 26.91' L = 52.58' E = 3.56' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 128+01.14 P.T. STA. = 128+53.72</p>	<p>PROP. CURVE NBRNP2-77 PI STA. = 128+90.93 <math>\Delta = 40^\circ 48' 51''</math> (LT) D = 57° 17' 45" R = 100.00' T = 37.20' L = 71.23' E = 6.70' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 128+53.72 P.T. STA. = 129+24.96</p>	<p>PROP. CURVE NBRNP2-78 PI STA. = 131+15.33 <math>\Delta = 52^\circ 40' 13''</math> (RT) D = 57° 17' 45" R = 100.00' T = 49.50' L = 91.93' E = 11.58' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 130+65.84 P.T. STA. = 131+57.76</p>	<p>PROP. CURVE NBRNP2-79 PI STA. = 132+93.22 <math>\Delta = 16^\circ 45' 27''</math> (LT) D = 28° 38' 52" R = 200.00' T = 29.46' L = 58.49' E = 2.16' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 132+63.76 P.T. STA. = 133+22.26</p>	<p>PROP. CURVE NBRNP2-80 PI STA. = 138+21.74 <math>\Delta = 54^\circ 13' 43''</math> (LT) D = 57° 17' 45" R = 100.00' T = 51.20' L = 94.65' E = 12.35' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 137+70.54 P.T. STA. = 138+65.18</p>	<p>PROP. CURVE NBRNP2-81 PI STA. = 138+95.22 <math>\Delta = 33^\circ 26' 07''</math> (RT) D = 57° 17' 45" R = 100.00' T = 30.04' L = 58.36' E = 4.41' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 138+65.18 P.T. STA. = 139+23.54</p>	<p>PROP. CURVE NBRNP2-82 PI STA. = 140+48.35 <math>\Delta = 25^\circ 21' 52''</math> (LT) D = 57° 17' 45" R = 100.00' T = 22.50' L = 44.27' E = 2.50' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 140+25.85 P.T. STA. = 140+70.12</p>	<p>PROP. CURVE NBRNP2-83 PI STA. = 140+97.91 <math>\Delta = 15^\circ 49' 13''</math> (RT) D = 28° 38' 52" R = 200.00' T = 27.79' L = 55.22' E = 1.92' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 140+70.12 P.T. STA. = 141+25.34</p>	<p>PROP. CURVE NBRNP2-84 PI STA. = 141+93.28 <math>\Delta = 25^\circ 37' 36''</math> (LT) D = 28° 38' 52" R = 200.00' T = 45.49' L = 89.45' E = 5.11' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 141+47.79 P.T. STA. = 142+37.25</p>	<p>PROP. CURVE NBRNP2-85 PI STA. = 142+73.51 <math>\Delta = 20^\circ 33' 19''</math> (RT) D = 28° 38' 52" R = 200.00' T = 36.27' L = 71.75' E = 3.26' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 142+37.25 P.T. STA. = 143+09.00</p>	<p>PROP. CURVE NBRNP2-86 PI STA. = 143+99.79 <math>\Delta = 48^\circ 49' 51''</math> (LT) D = 28° 38' 52" R = 200.00' T = 90.79' L = 170.45' E = 19.64' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 143+09.00 P.T. STA. = 144+79.45</p>	<p>PROP. CURVE NBRNP2-87 PI STA. = 146+90.31 <math>\Delta = 11^\circ 07' 33''</math> (LT) D = 57° 17' 45" R = 100.00' T = 48.70' L = 97.09' E = 1.94' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 146+41.61 P.T. STA. = 147+38.71</p>	<p>PROP. CURVE NBRNP2-88 PI STA. = 149+93.15 <math>\Delta = 22^\circ 22' 07''</math> (LT) D = 57° 17' 45" R = 100.00' T = 19.77' L = 39.04' E = 0.50' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 149+73.37 P.T. STA. = 150+12.42</p>	<p>PROP. CURVE NBRNP2-89 PI STA. = 151+04.79 <math>\Delta = 5^\circ 08' 18''</math> (RT) D = 57° 17' 45" R = 100.00' T = 22.44' L = 44.84' E = 0.50' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 150+82.35 P.T. STA. = 151+27.19</p>
<p>PROP. CURVE NBRNP2-90 PI STA. = 153+07.75 <math>\Delta = 56^\circ 07' 24''</math> (RT) D = 57° 17' 45" R = 100.00' T = 53.31' L = 97.95' E = 13.32' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 152+54.45 P.T. STA. = 153+52.40</p>	<p>PROP. CURVE NBRNP2-91 PI STA. = 156+70.60 <math>\Delta = 34^\circ 53' 52''</math> (RT) D = 22° 55' 06" R = 250.00' T = 78.58' L = 152.27' E = 12.06' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 155+92.02 P.T. STA. = 157+44.29</p>	<p>PROP. CURVE NBRNP2-92 PI STA. = 159+39.84 <math>\Delta = 40^\circ 44' 27''</math> (LT) D = 38° 11' 50" R = 150.00' T = 55.70' L = 106.66' E = 10.01' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 158+84.15 P.T. STA. = 159+90.81</p>	<p>PROP. CURVE NBRNP2-93 PI STA. = 160+73.34 <math>\Delta = 24^\circ 19' 32''</math> (RT) D = 57° 17' 45" R = 100.00' T = 21.55' L = 42.46' E = 2.30' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 160+51.79 P.T. STA. = 160+94.24</p>	<p>PROP. CURVE NBRNP2-94 PI STA. = 162+64.55 <math>\Delta = 65^\circ 32' 32''</math> (RT) D = 57° 17' 45" R = 100.00' T = 64.37' L = 114.39' E = 18.93' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 162+00.18 P.T. STA. = 163+14.57</p>	<p>PROP. CURVE NBRNP2-95 PI STA. = 164+05.85 <math>\Delta = 84^\circ 46' 38''</math> (LT) D = 57° 17' 45" R = 100.00' T = 91.28' L = 147.96' E = 35.39' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 163+14.57 P.T. STA. = 164+62.54</p>	<p>PROP. CURVE NBRNP2-96 PI STA. = 165+72.54 <math>\Delta = 17^\circ 06' 24''</math> (LT) D = 57° 17' 45" R = 100.00' T = 15.04' L = 29.86' E = 1.12' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 165+57.50 P.T. STA. = 165+87.36</p>														

FILE NAME = D:\Cook\FPO\_203827481\_Non-URB-ave-Ext-Roadway\_Phase 2\_Engineering\Drawings\16833-4\16833-4.dwg  
 USER NAME = David.Landwehr  
 DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -  
 REVISED -  
 REVISED -  
 REVISED -  
 REVISED -



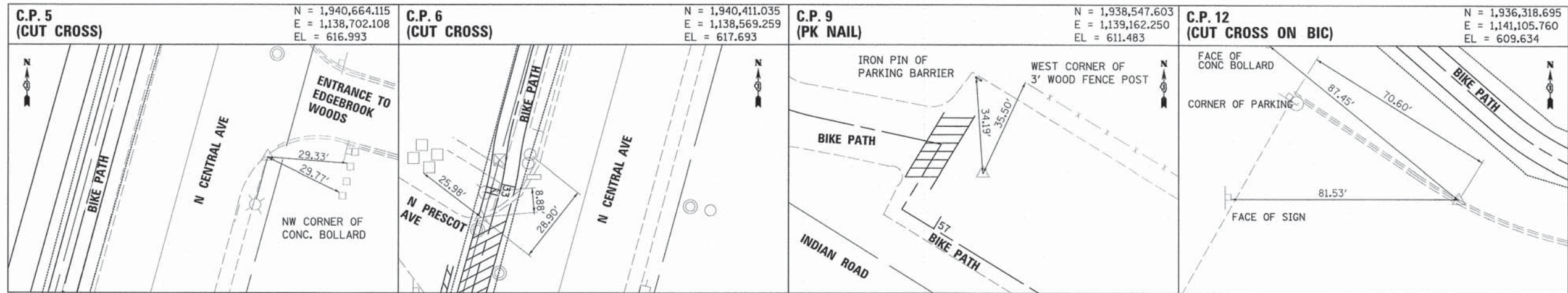
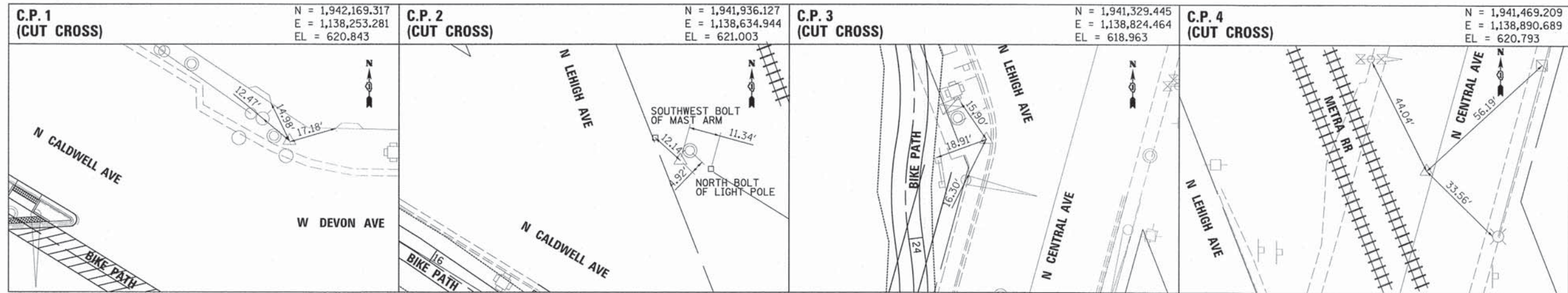
USER NAME = David.Landwehr	DESIGNED -	REVISED -
PLOT SCALE = 200:1	DRAWN -	REVISED -
PLOT DATE = 12/12/2014	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION  
ALIGNMENT, TIES, & BENCHMARKS**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
08-F3000-21-BT		COOK	129	14
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT CONTRACT NO. 61A86			

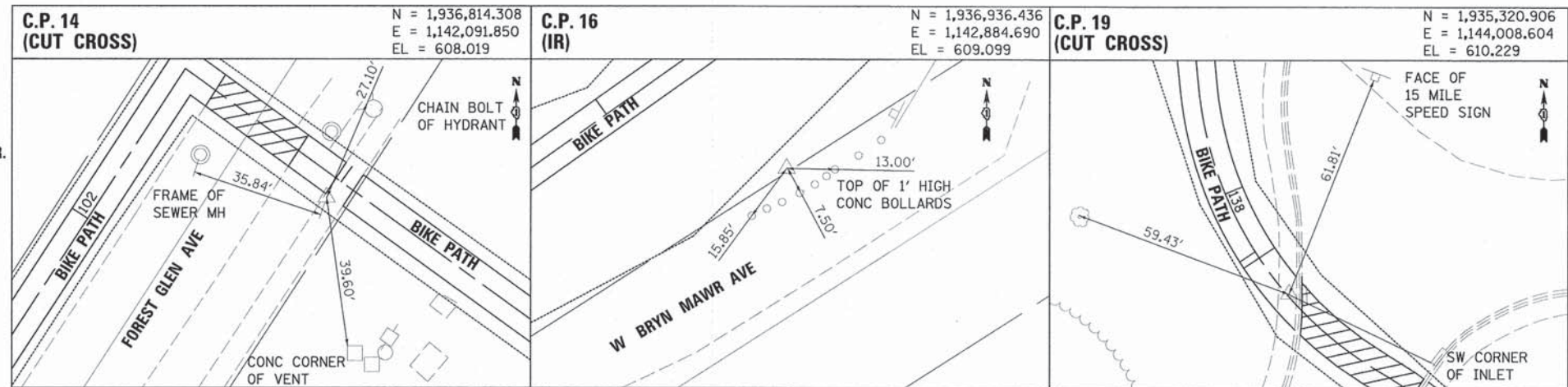


**BENCHMARKS**

BM #102: TOP OF FIRE HYDRANT CHAIN BOLT, LOCATED AT THE WEST SIDE OF CENTRAL AVE. APPROX. 250' SOUTH OF N. LOUIS AVE. ELEV. 617.45

BM #104: CUT SQUARE AT THE WEST END OF SOUTH ABUTMENT SEAT OF CICERO AVE. BRIDGE OVER NORTH BRANCH CHICAGO RIVER. ELEV. 601.00

ALL ELEVATIONS IN THE PLANS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



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USER NAME = David.Landwehr  
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

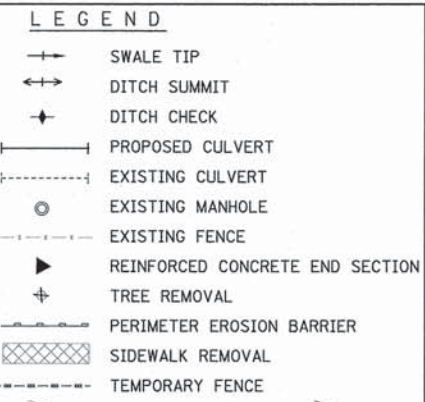
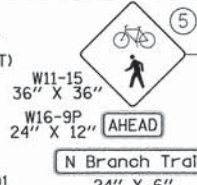
NORTH BRANCH BIKE TRAIL EXTENSION

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	15
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

**PROP. CURVE 1**  
 PI STA. = 10+18.71  
 $\Delta = 21^\circ 11' 49''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 18.71'$   
 $L = 37.00'$   
 $E = 1.74'$   
 P.C. STA. = 10+00.00  
 P.T. STA. = 10+37.00

**PROP. CURVE 2**  
 PI STA. = 10+70.47  
 $\Delta = 22^\circ 01' 45''$  (LT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 19.46'$   
 $L = 38.45'$   
 $E = 1.88'$   
 P.C. STA. = 10+51.01  
 P.T. STA. = 10+89.46



PROP. STOP BAR - WHITE THERMOPLASTIC PAVEMENT MARKING, LINE 24\"/>

PROPOSED 10\"/>

PROPOSED  $\frac{1}{2}$  BIKE TRAIL PAINT PAVEMENT MARKING, YELLOW LINE 4\"/>

PCC CURB RAMP WITH DETECTABLE WARNINGS AND COMB. CONC. CURB & GUTTER REMOVAL & REPLACEMENT (TYP) REPLACEMENT WITH DEPRESSED CURB & GUTTER (TYP)

PROP. LIGHT POLE FOUNDATION, 24\"/>

TEMPORARY FENCE (TYP)



FOR INTERSECTION DETAILS SEE SHEET 29

PCC CURB RAMP WITH DETECTABLE WARNINGS AND COMB. CONC. CURB & GUTTER REMOVAL & REPLACEMENT (TYP) REPLACEMENT WITH DEPRESSED CURB & GUTTER (TYP)

LOCATIONS OF STORAGE AREAS AND STOCKPILES TO BE APPROVED BY THE ENGINEER

PROP. CURVE 3  
 PI STA. = 11+27.89  
 $\Delta = 25^\circ 22' 35''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 22.51'$   
 $L = 44.29'$   
 $E = 2.50'$   
 P.C. STA. = 11+05.38  
 P.T. STA. = 11+49.67

PROP. CURVE 4  
 PI STA. = 17+82.31  
 $\Delta = 34^\circ 01' 09''$  (RT)  
 $D = 38^\circ 11' 50''$   
 $R = 150.00'$   
 $T = 45.89'$   
 $L = 89.06'$   
 $E = 6.86'$   
 P.C. STA. = 17+36.42  
 P.T. STA. = 18+25.48

PROP. CURVE 5  
 PI STA. = 19+17.42  
 $\Delta = 6^\circ 58' 33''$  (RT)  
 $D = 28^\circ 38' 52''$   
 $R = 200.00'$   
 $T = 12.19'$   
 $L = 24.35'$   
 $E = 0.37'$   
 P.C. STA. = 19+05.23  
 P.T. STA. = 19+29.58

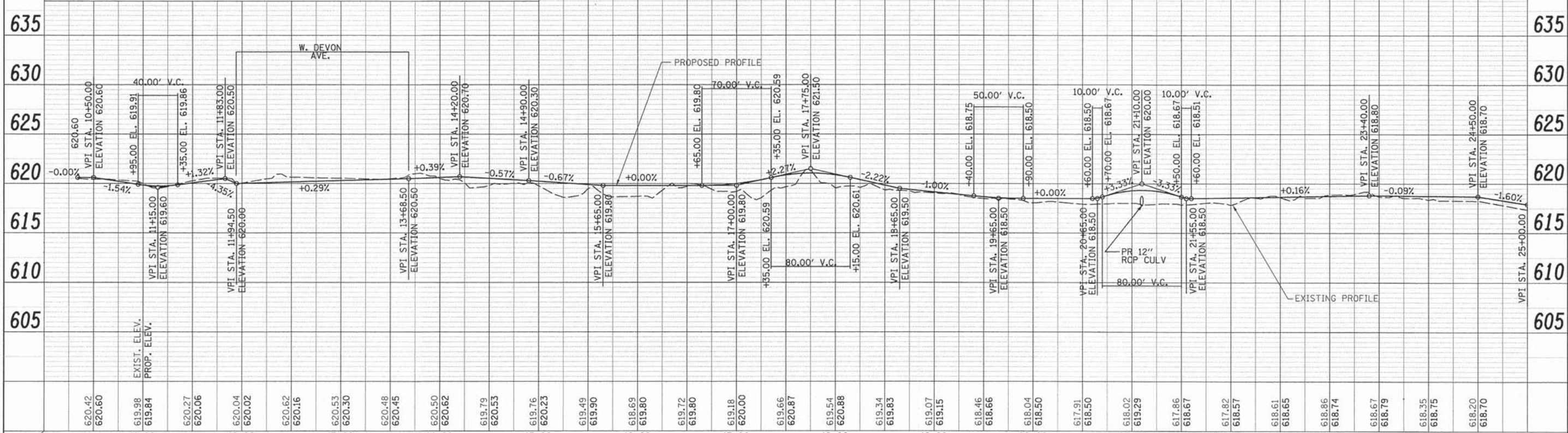
PROP. CURVE 6  
 PI STA. = 19+94.54  
 $\Delta = 33^\circ 17' 15''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 29.89'$   
 $L = 58.10'$   
 $E = 4.37'$   
 P.C. STA. = 19+64.65  
 P.T. STA. = 20+22.75

PROP. CURVE 7  
 PI STA. = 21+17.32  
 $\Delta = 80^\circ 38' 20''$  (LT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 12.19'$   
 $L = 140.74'$   
 $E = 31.16'$   
 P.C. STA. = 20+32.46  
 P.T. STA. = 21+73.20

PROP. CURVE 8  
 PI STA. = 22+16.94  
 $\Delta = 40^\circ 23' 14''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 36.78'$   
 $L = 70.49'$   
 $E = 6.55'$   
 P.C. STA. = 21+80.16  
 P.T. STA. = 22+50.65

PROP. CURVE 9  
 PI STA. = 23+01.95  
 $\Delta = 35^\circ 14' 52''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 31.77'$   
 $L = 61.52'$   
 $E = 4.92'$   
 P.C. STA. = 22+70.18  
 P.T. STA. = 23+31.70

① REMOVE SIGN PANEL ASSEMBLY, TYPE A	④ N Branch Trail 24" X 18"	
② REMOVE DROP GATE (PAID FOR AS BOLLARD REMOVAL)	D11-1	
③ RELOCATE SIGN PANEL ASSEMBLY, TYPE B	BIKE ROUTE 24" X 18"	



USER NAME = David.Landwehr  
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 DEPARTMENT OF TRANSPORTATION

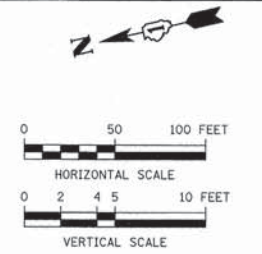
NORTH BRANCH BIKE TRAIL EXTENSION  
 PLAN AND PROFILE

SCALE: 1" = 50' DRAWING NO. 1 OF 12 STA. 10+00 TO STA. 24+75

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	16
				CONTRACT NO. 61A86
ILLINOIS FED. AID PROJECT				

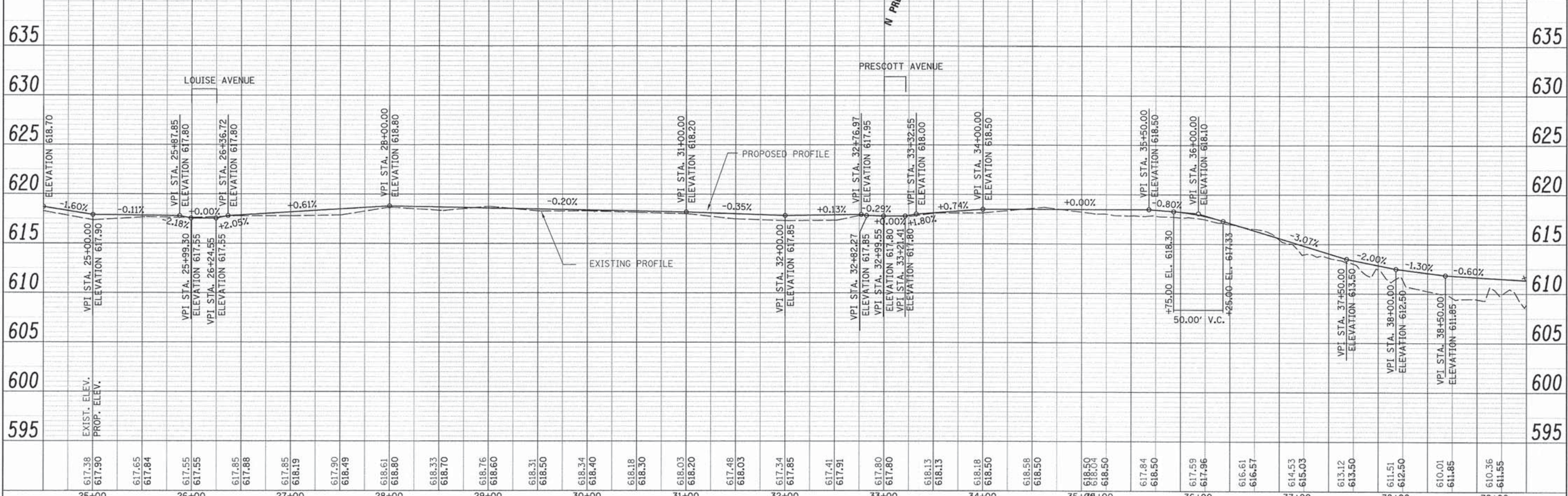
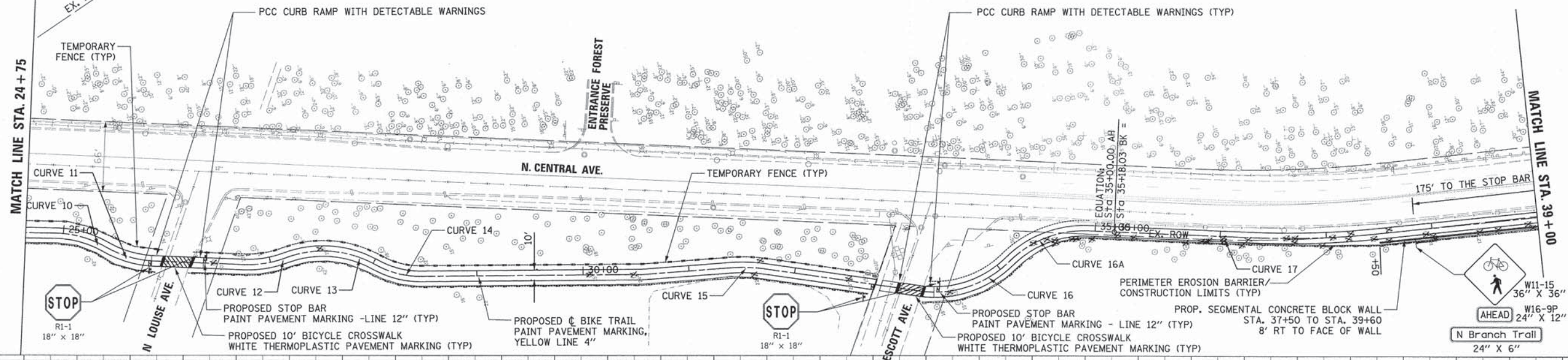


PROP. CURVE NBRNPH2-10 PI STA. = 25+17.93 Δ = 28° 53' 54" (RT) D = 57° 17' 45" R = 100.00' T = 25.77' L = 50.44' E = 3.27' P.C. STA. = 24+92.17 P.T. STA. = 25+42.60	PROP. CURVE NBRNPH2-11 PI STA. = 25+67.06 Δ = 27° 28' 58" (LT) D = 57° 17' 45" R = 100.00' T = 24.45' L = 47.97' E = 2.95' P.C. STA. = 25+42.60 P.T. STA. = 25+90.57	PROP. CURVE NBRNPH2-12 PI STA. = 26+95.14 Δ = 23° 02' 29" (LT) D = 57° 17' 45" R = 100.00' T = 20.38' L = 40.21' E = 2.06' P.C. STA. = 26+74.76 P.T. STA. = 27+14.97	PROP. CURVE NBRNPH2-13 PI STA. = 27+61.83 Δ = 50° 12' 48" (RT) D = 57° 17' 45" R = 100.00' T = 22.71' L = 44.39' E = 2.98' P.C. STA. = 27+14.97 P.T. STA. = 28+02.61	PROP. CURVE NBRNPH2-14 PI STA. = 28+25.32 Δ = 29° 55' 08" (LT) D = 67° 24' 24" R = 150.00' T = 16.35' L = 32.57' E = 0.89' P.C. STA. = 31+39.23 P.T. STA. = 31+71.81	PROP. CURVE NBRNPH2-15 PI STA. = 31+55.58 Δ = 12° 26' 30" (RT) D = 38° 11' 50" R = 100.00' T = 46.86' L = 87.64' E = 10.43' P.C. STA. = 28+02.61 P.T. STA. = 28+47.00	PROP. CURVE NBRNPH2-16 PI STA. = 33+68.83 Δ = 52° 56' 58" (LT) D = 57° 17' 45" R = 100.00' T = 49.80' L = 92.41' E = 11.72' P.C. STA. = 33+19.03 P.T. STA. = 34+11.44	PROP. CURVE NBRNPH2-16A PI STA. = 34+55.03 Δ = 47° 06' 25" (RT) D = 57° 17' 45" R = 100.00' T = 43.59' L = 82.22' E = 9.09' P.C. STA. = 34+11.44 P.T. STA. = 34+93.66	PROP. CURVE NBRNPH2-17 PI STA. = 36+90.79 Δ = 8° 14' 07" (LT) D = 7° 09' 43" R = 800.00' T = 57.59' L = 114.98' E = 2.07' P.C. STA. = 36+33.20 P.T. STA. = 37+48.19
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<p>100 SOUTH WABLER DRIVE, SUITE 500 CHICAGO, IL 60606 (312) 939-1000</p>	USER NAME = David.Landwehr	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION</b> <b>PLAN AND PROFILE</b>	F.A.U. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO. 08-F3000-21-BT 12 COOK 129 17 CONTRACT NO. 61A86
	PLOT SCALE = 5/8"=1'-0"	DRAWN -	REVISED -			
	DATE = 10/20/14	CHECKED -	REVISED -			
	SCALE: 1"= 50'	DRAWING NO. 2 OF 12	STA. 24+75 TO STA. 39+00			
	ILLINOIS FED. AID PROJECT					

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 PLAN: SURVEYED \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 NO. OF REVISIONS CHECKED: \_\_\_\_\_  
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DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 PROFILE: SURVEYED \_\_\_\_\_  
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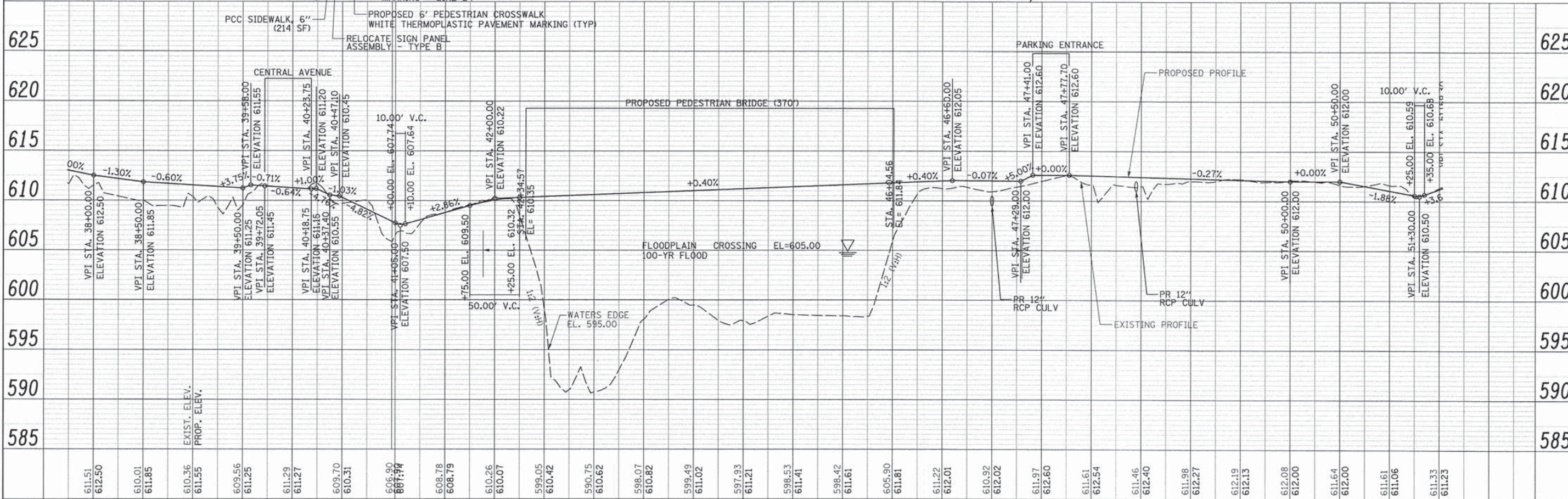
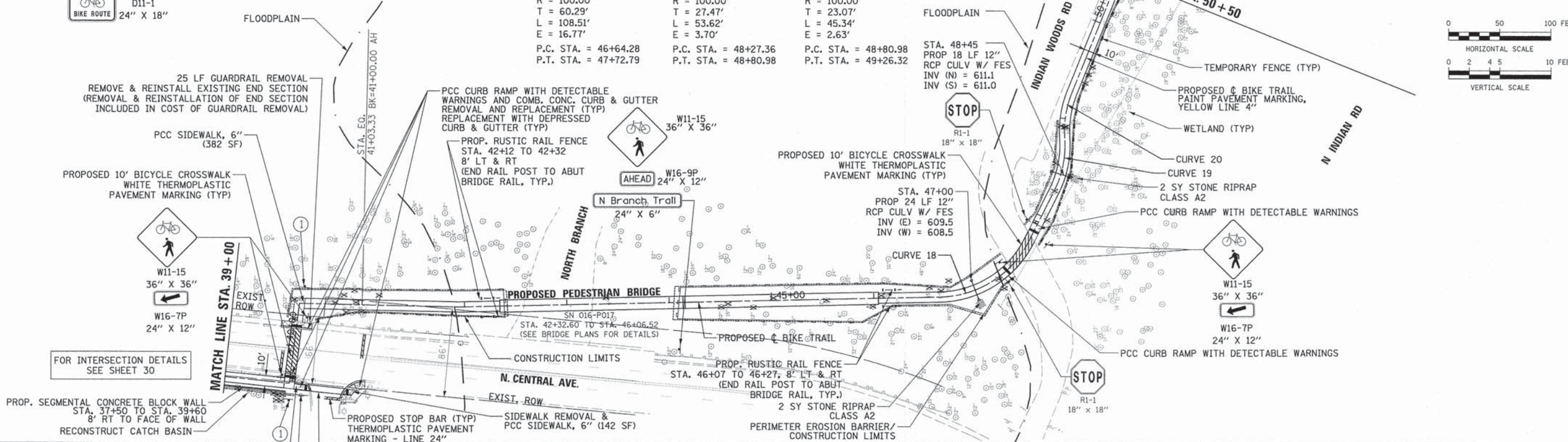
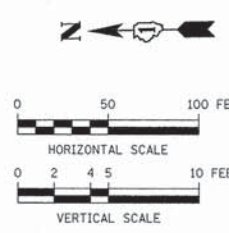
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① N Branch Trail 24" X 18"  
 BIKE ROUTE D11-1 24" X 18"

PROP. CURVE NBRNP2-18  
 PI STA. = 47+24.57  
 $\Delta = 62^\circ 10' 17''$  (LT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 60.29'$   
 $L = 108.51'$   
 $E = 16.77'$   
 P.C. STA. = 46+64.28  
 P.T. STA. = 47+72.79

PROP. CURVE NBRNP2-19  
 PI STA. = 48+54.83  
 $\Delta = 30^\circ 43' 21''$  (LT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 27.47'$   
 $L = 53.62'$   
 $E = 3.70'$   
 P.C. STA. = 48+27.36  
 P.T. STA. = 48+80.98

PROP. CURVE NBRNP2-20  
 PI STA. = 49+04.05  
 $\Delta = 25^\circ 58' 40''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 23.07'$   
 $L = 45.34'$   
 $E = 2.63'$   
 P.C. STA. = 48+80.98  
 P.T. STA. = 49+26.32



611.51	612.50	610.01	611.85	610.36	611.55	609.56	611.25	611.29	611.27	609.70	610.31	606.90	607.94	608.78	608.79	610.26	610.07	599.05	610.42	599.75	610.62	598.07	610.82	599.49	611.02	597.93	611.21	598.53	611.41	598.42	611.61	605.90	611.81	611.22	612.01	610.92	612.02	611.97	612.60	611.61	612.54	611.46	612.40	611.98	612.27	612.19	612.13	612.08	612.00	611.64	612.00	611.61	611.06	611.33	611.23
38+00	38+00	39+00	39+00	39+00	39+00	39+50	39+50	39+50	39+50	39+50	39+50	41+00	41+00	41+00	41+00	42+00	42+00	42+00	42+00	43+00	43+00	43+00	44+00	44+00	44+00	44+00	44+00	45+00	45+00	46+00	46+00	46+00	47+00	47+00	47+00	47+00	47+00	48+00	48+00	48+00	49+00	49+00	49+00	49+00	49+00	50+00	50+00	50+00	50+00	51+00	51+00	51+00	51+00	51+00	51+00



USER NAME = David.Landwehr  
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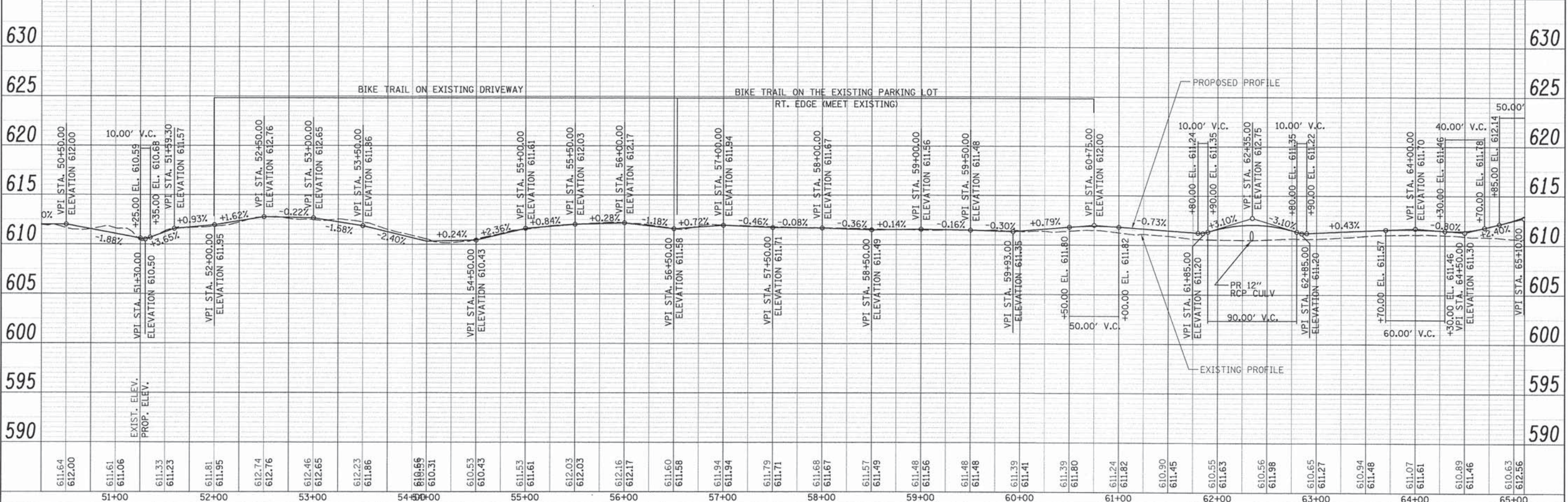
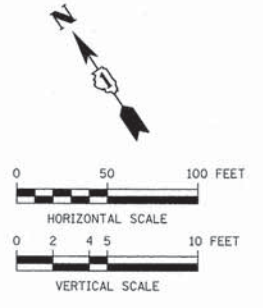
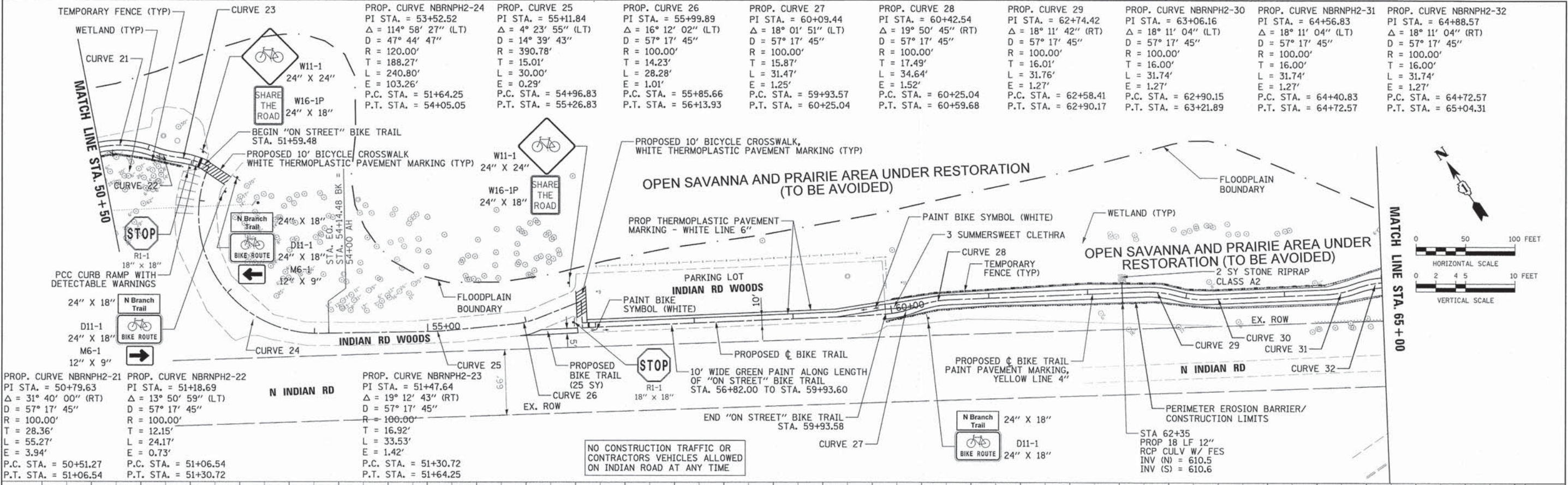
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 PLAN AND PROFILE  
 SCALE: 1" = 50'  
 DRAWING NO. 3 OF 12  
 STA. 39+00 TO STA. 51+00

F.A.U. SECTION COUNTY TOTAL SHEETS SHEET NO.  
 RTE. 08-F3000-21-BT COOK 129 18  
 CONTRACT NO. 61A86  
 ILLINOIS FED. AID PROJECT

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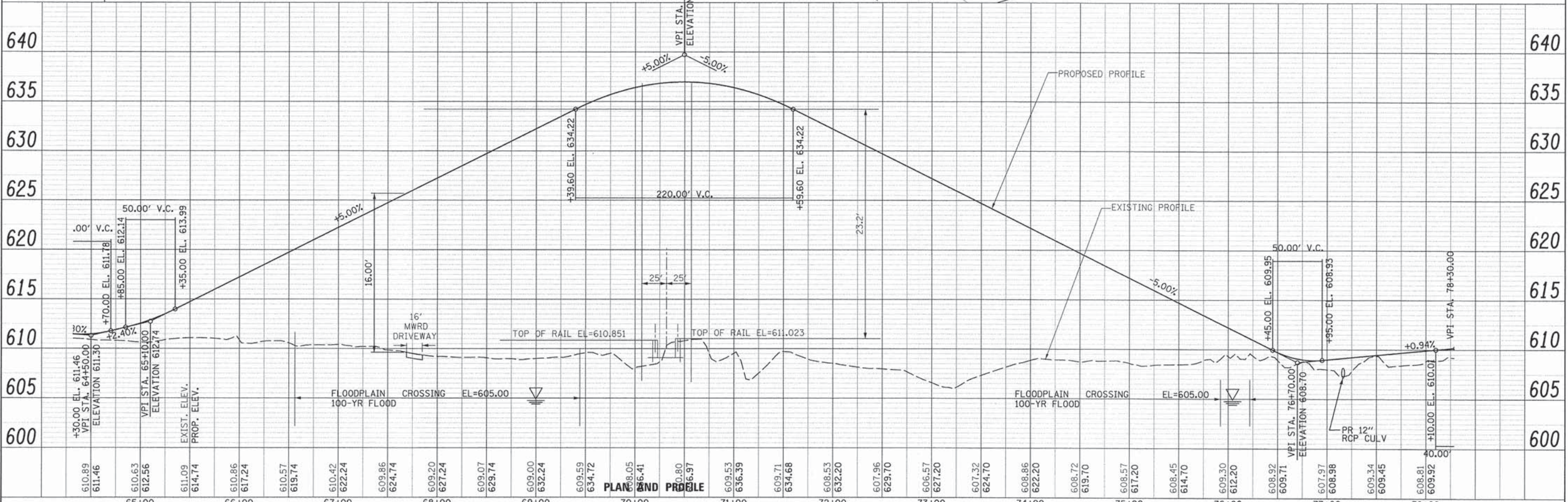
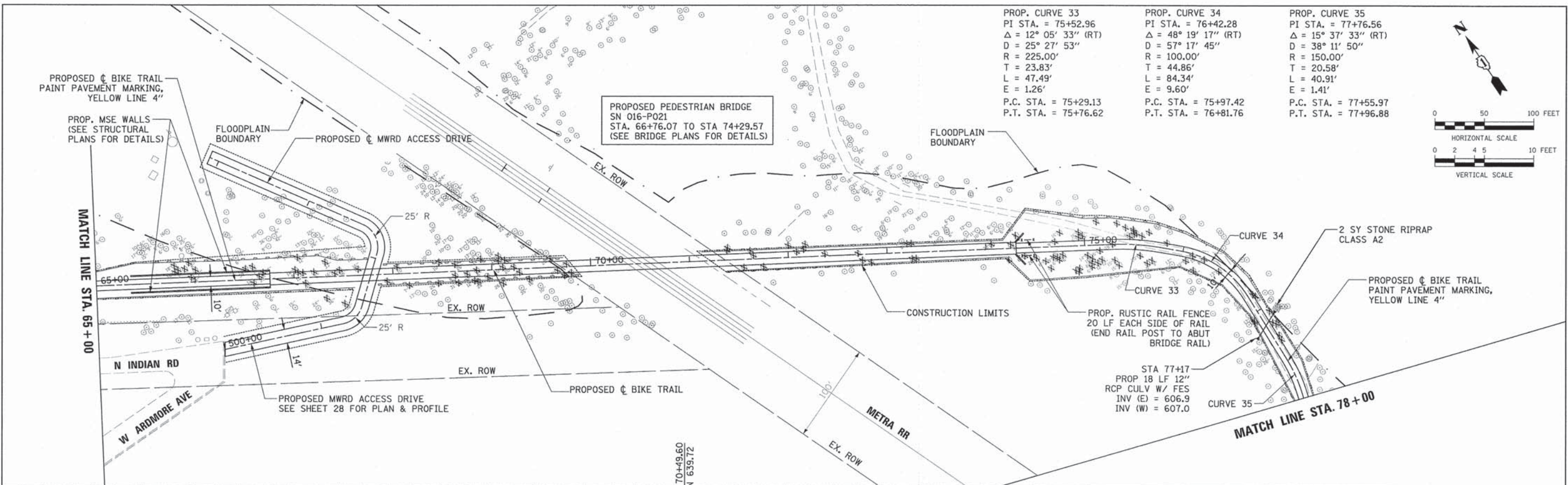
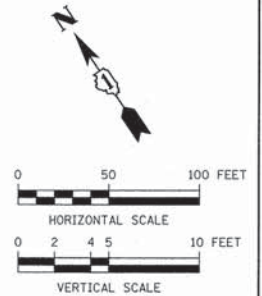
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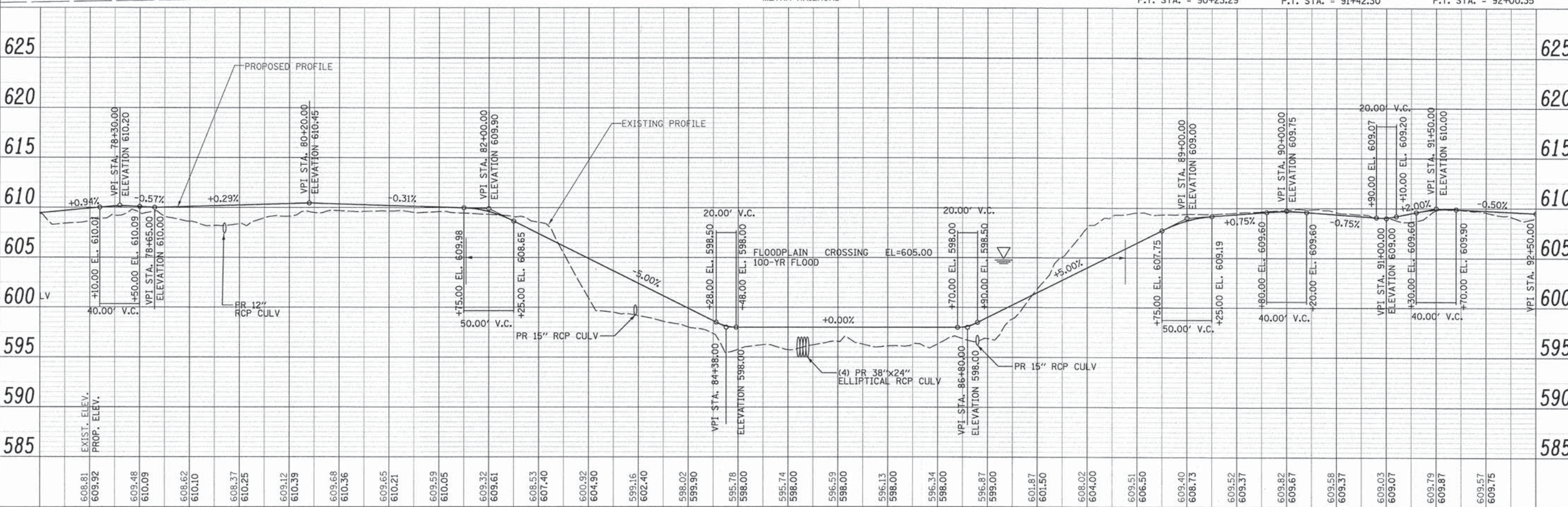
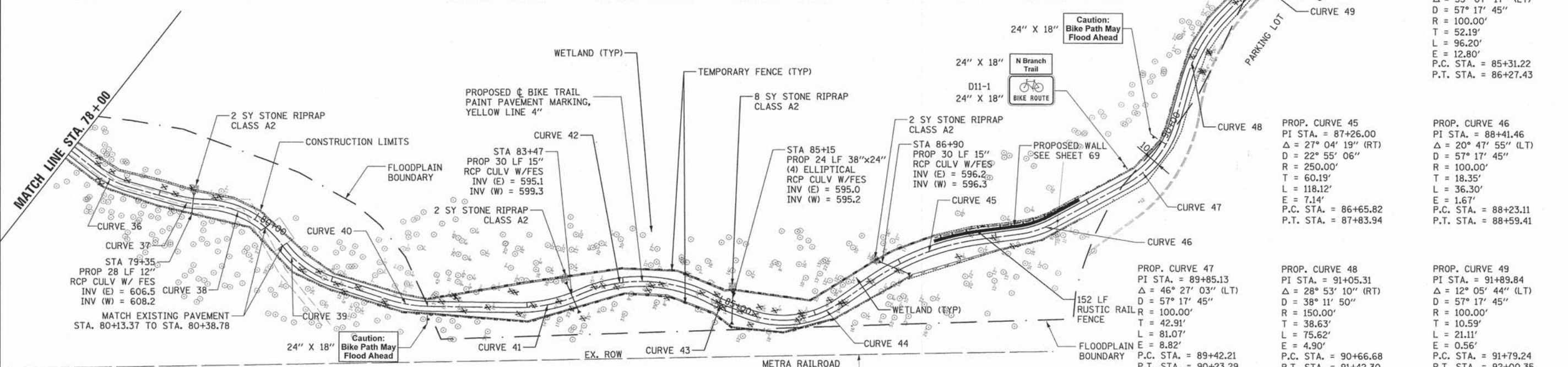
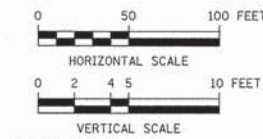
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PROP. CURVE 33	PROP. CURVE 34	PROP. CURVE 35
PI STA. = 75+52.96	PI STA. = 76+42.28	PI STA. = 77+76.56
$\Delta = 12^\circ 05' 33''$ (RT)	$\Delta = 48^\circ 19' 17''$ (RT)	$\Delta = 15^\circ 37' 33''$ (RT)
D = 25° 27' 53"	D = 57° 17' 45"	D = 38° 11' 50"
R = 225.00'	R = 100.00'	R = 150.00'
T = 23.83'	T = 44.86'	T = 20.58'
L = 47.49'	L = 84.34'	L = 40.91'
E = 1.26'	E = 9.60'	E = 1.41'
P.C. STA. = 75+29.13	P.C. STA. = 75+97.42	P.C. STA. = 77+55.97
P.T. STA. = 75+76.62	P.T. STA. = 76+81.76	P.T. STA. = 77+96.88



	USER NAME = David.Landwehr	DESIGNED =	REVISED =	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION</b> <b>PLAN AND PROFILE</b>	SECTION 08-F3000-21-BT	COUNTY COOK	TOTAL SHEETS 129	SHEET NO. 20
	PLOT SCALE = 1/8" = 1'-0" PLOT DATE = 10/20/14	DRAWN = CHECKED = DATE = 10/20/14	REVISED = REVISED = REVISED =						

<b>PROP. CURVE 36</b> PI STA. = 78+50.53 $\Delta = 22^\circ 36' 15''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 19.99'$ $L = 39.45'$ $E = 1.98'$ P.C. STA. = 78+30.54 P.T. STA. = 78+69.99	<b>PROP. CURVE 37</b> PI STA. = 79+32.60 $\Delta = 14^\circ 36' 40''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 12.82'$ $L = 25.50'$ $E = 0.82'$ P.C. STA. = 79+19.78 P.T. STA. = 79+45.28	<b>PROP. CURVE 38</b> PI STA. = 79+95.40 $\Delta = 53^\circ 14' 30''$ (RT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 50.12'$ $L = 92.92'$ $E = 11.86'$ P.C. STA. = 79+45.28 P.T. STA. = 80+38.20	<b>PROP. CURVE 39</b> PI STA. = 80+71.11 $\Delta = 36^\circ 25' 57''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 32.91'$ $L = 63.59'$ $E = 5.28'$ P.C. STA. = 80+38.20 P.T. STA. = 81+01.79	<b>PROP. CURVE 40</b> PI STA. = 81+82.02 $\Delta = 16^\circ 55' 52''$ (LT) $D = 38^\circ 11' 50''$ $R = 150.00'$ $T = 22.33'$ $L = 44.33'$ $E = 1.65'$ P.C. STA. = 81+59.69 P.T. STA. = 82+04.02	<b>PROP. CURVE 41</b> PI STA. = 83+22.40 $\Delta = 24^\circ 54' 57''$ (LT) $D = 38^\circ 11' 50''$ $R = 150.00'$ $T = 33.14'$ $L = 65.23'$ $E = 3.62'$ P.C. STA. = 82+89.26 P.T. STA. = 83+54.49	<b>PROP. CURVE 42</b> PI STA. = 84+29.09 $\Delta = 52^\circ 53' 12''$ (RT) $D = 38^\circ 11' 50''$ $R = 150.00'$ $T = 74.60'$ $L = 138.46'$ $E = 17.53'$ P.C. STA. = 83+54.49 P.T. STA. = 84+92.95	<b>PROP. CURVE 43</b> PI STA. = 85+00.12 $\Delta = 8^\circ 12' 09''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 7.17'$ $L = 14.32'$ $E = 0.26'$ P.C. STA. = 84+92.95 P.T. STA. = 85+07.26
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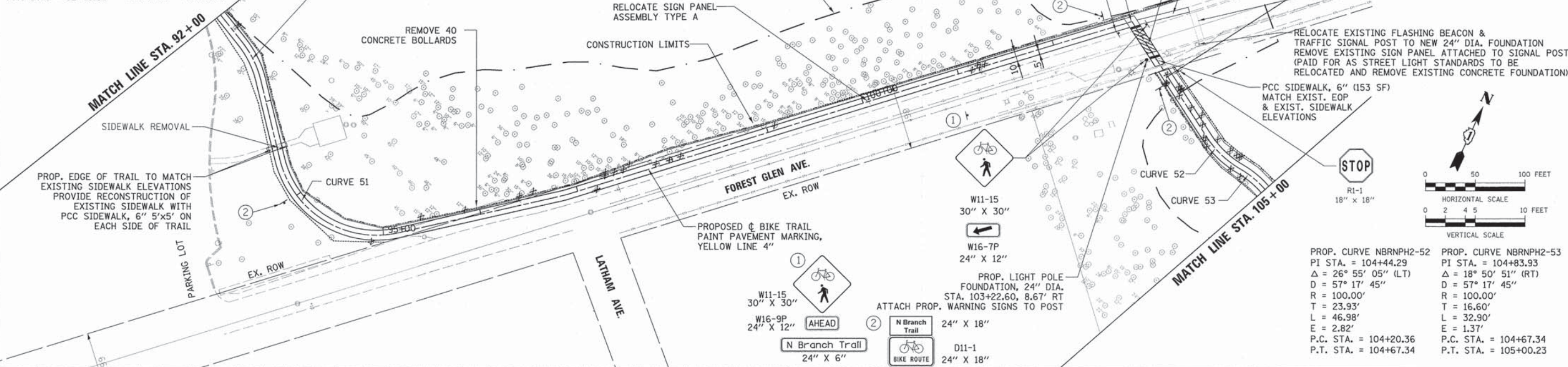
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	USER NAME = David.Landwehr DESIGNED - DRAWN - CHECKED - DATE = 10/20/14	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>		<b>NORTH BRANCH BIKE TRAIL EXTENSION PLAN AND PROFILE</b>		F.A.U. SECTION COUNTY TOTAL SHEETS SHEET NO. RTE. 08-F3000-21-BT COOK 129 21
	PLOT SCALE = 5/8"=1'-0" PLOT DATE = 12/15/2014			SCALE: 1"= 50' DRAWING NO. 6 OF 12 STA. 78+00 TO STA. 92+00		CONTRACT NO. 61A86 ILLINOIS FED. AID PROJECT	

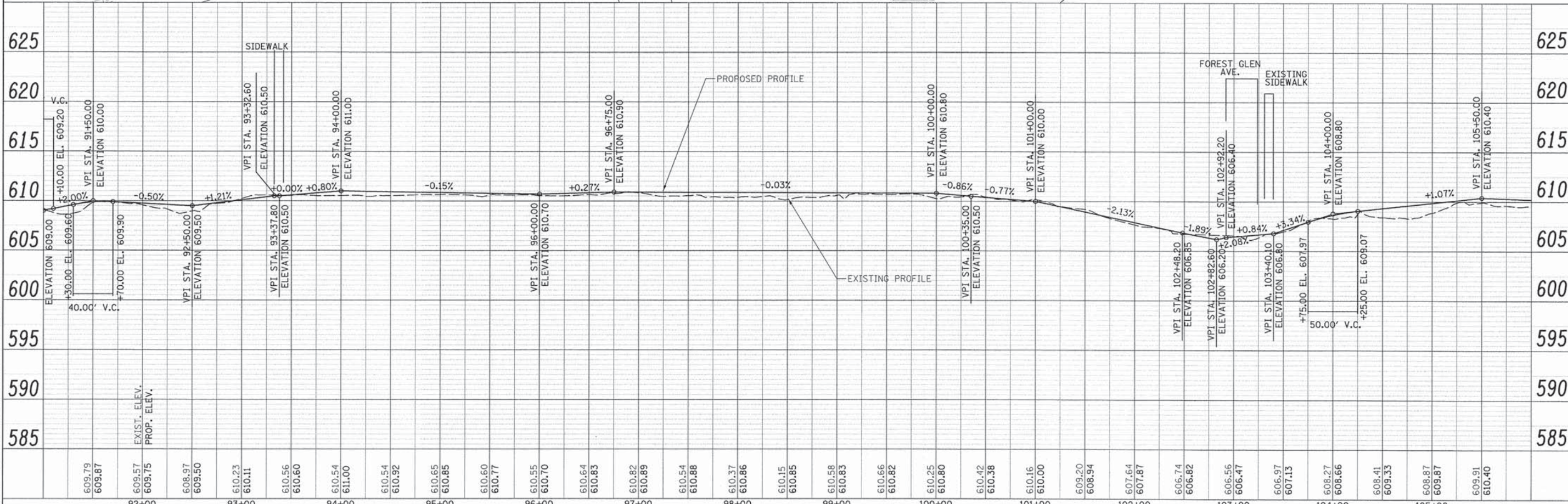
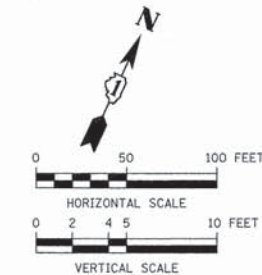
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 PI STA. = 92+56.60  
 $\Delta = 25^\circ 00' 03''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 22.17'$   
 $L = 43.63'$   
 $E = 2.43'$   
 P.C. STA. = 92+34.43  
 P.T. STA. = 92+78.06

PROP. CURVE 51  
 PI STA. = 94+58.19  
 $\Delta = 89^\circ 14' 40''$  (LT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 98.69'$   
 $L = 155.76'$   
 $E = 40.50'$   
 P.C. STA. = 93+59.50  
 P.T. STA. = 95+15.26



PROP. CURVE NBRNPH2-52  
 PI STA. = 104+44.29  
 $\Delta = 26^\circ 55' 05''$  (LT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 23.93'$   
 $L = 46.98'$   
 $E = 2.82'$   
 P.C. STA. = 104+20.36  
 P.T. STA. = 104+67.34

PROP. CURVE NBRNPH2-53  
 PI STA. = 104+83.93  
 $\Delta = 18^\circ 50' 51''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 16.60'$   
 $L = 32.90'$   
 $E = 1.37'$   
 P.C. STA. = 104+67.34  
 P.T. STA. = 105+00.23



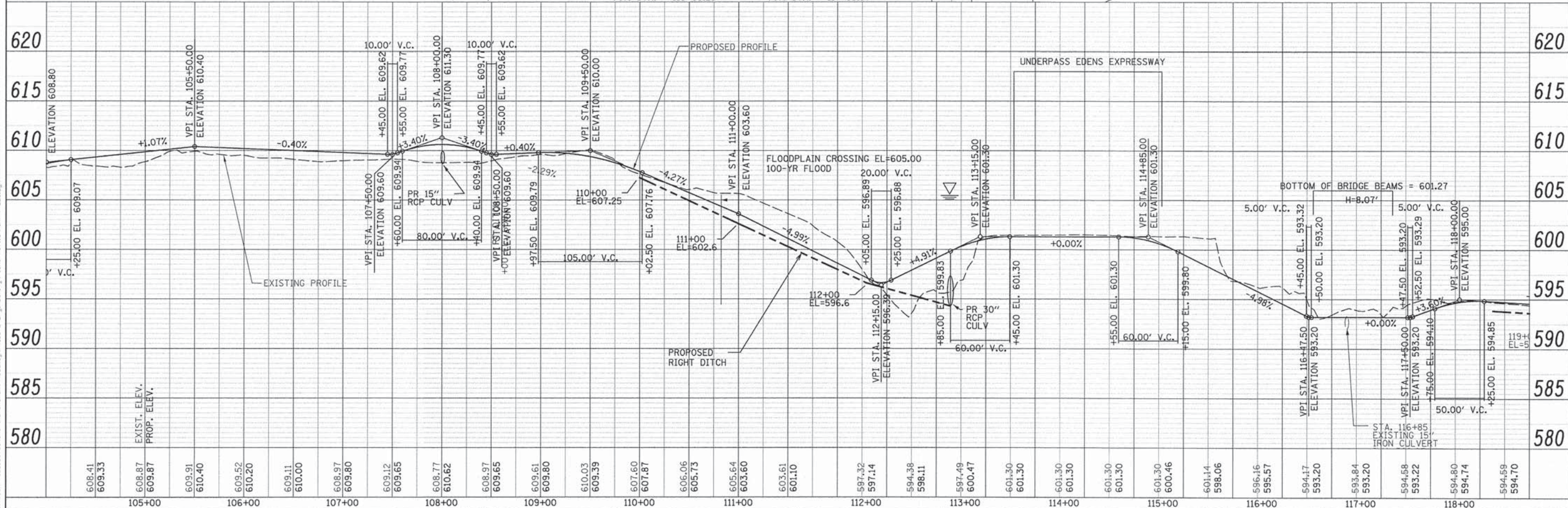
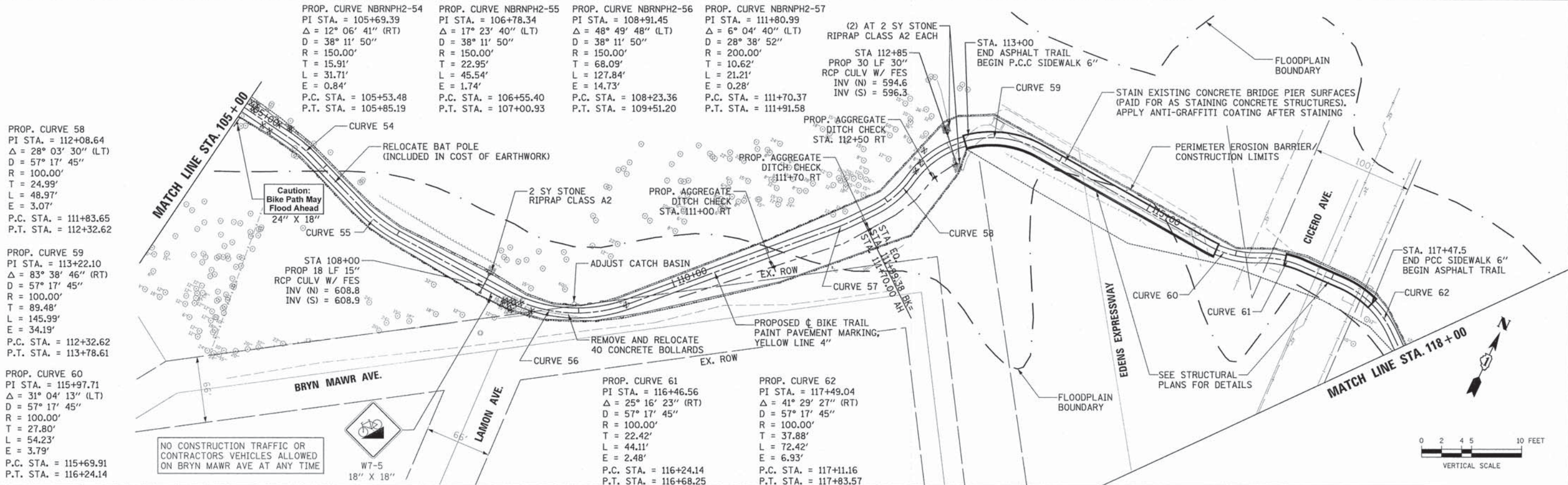
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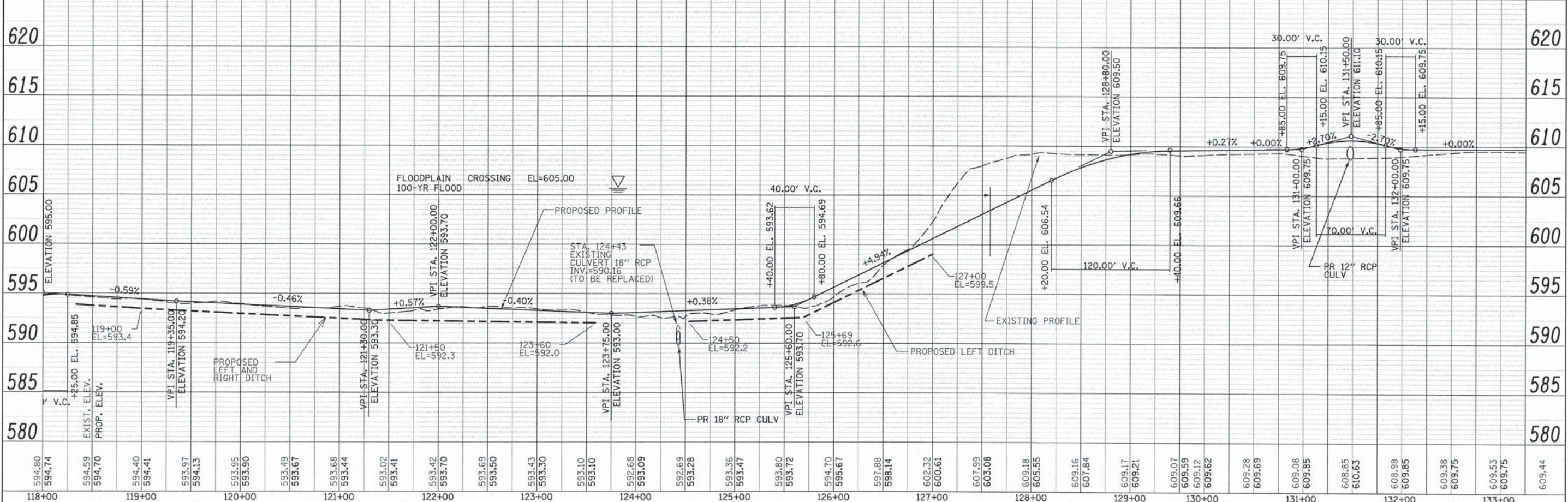
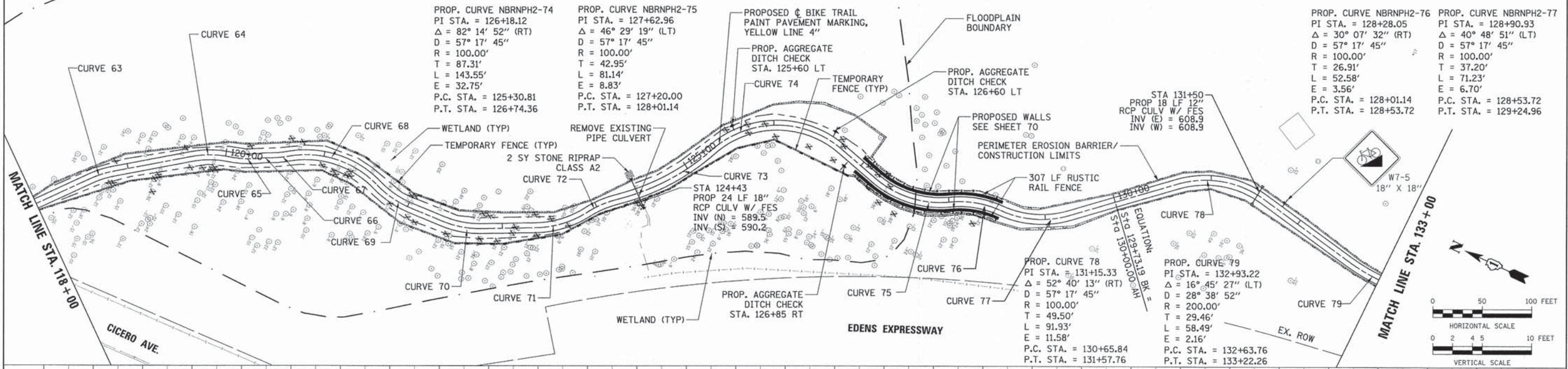
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	USER NAME = David.Landwehr	DESIGNED =	REVISED =	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION</b> <b>PLAN AND PROFILE</b>	SECTION 08-F3000-21-BT	COUNTY COOK	TOTAL SHEETS 129	SHEET NO. 23
	PLOT SCALE = 50.0000' / 1"	CHECKED =	REVISED =						
DATE = 10/20/14	DATE = 12/12/2014	REVISED =	REVISED =						

<b>PROP. CURVE 63</b> PI STA. = 118+72.53 $\Delta = 14^\circ 05' 43''$ (RT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 12.36'$ $L = 24.60'$ $E = 0.76'$ P.C. STA. = 118+60.17 P.T. STA. = 118+84.77	<b>PROP. CURVE 64</b> PI STA. = 119+84.83 $\Delta = 22^\circ 17' 49''$ (RT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 19.71'$ $L = 38.92'$ $E = 1.92'$ P.C. STA. = 119+65.12 P.T. STA. = 120+04.04	<b>PROP. CURVE 65</b> PI STA. = 120+19.61 $\Delta = 17^\circ 42' 29''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 15.58'$ $L = 30.91'$ $E = 1.21'$ P.C. STA. = 120+04.04 P.T. STA. = 120+34.94	<b>PROP. CURVE 66</b> PI STA. = 120+40.57 $\Delta = 6^\circ 26' 22''$ (RT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 5.63'$ $L = 11.24'$ $E = 0.16'$ P.C. STA. = 120+34.94 P.T. STA. = 120+46.18	<b>PROP. CURVE 67</b> PI STA. = 120+55.19 $\Delta = 10^\circ 17' 50''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 9.01'$ $L = 17.97'$ $E = 0.41'$ P.C. STA. = 120+46.18 P.T. STA. = 120+64.15	<b>PROP. CURVE 68</b> PI STA. = 121+17.59 $\Delta = 56^\circ 14' 26''$ (RT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 53.44'$ $L = 98.16'$ $E = 13.38'$ P.C. STA. = 120+64.15 P.T. STA. = 121+62.31	<b>PROP. CURVE 69</b> PI STA. = 121+83.13 $\Delta = 23^\circ 31' 10''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 20.82'$ $L = 41.05'$ $E = 2.14'$ P.C. STA. = 121+62.31 P.T. STA. = 122+03.36	<b>PROP. CURVE 70</b> PI STA. = 122+58.66 $\Delta = 23^\circ 35' 56''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 20.89'$ $L = 41.19'$ $E = 2.16'$ P.C. STA. = 122+37.77 P.T. STA. = 122+78.96	<b>PROP. CURVE 71</b> PI STA. = 123+61.98 $\Delta = 31^\circ 40' 52''$ (LT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 28.37'$ $L = 55.29'$ $E = 3.95'$ P.C. STA. = 123+33.61 P.T. STA. = 123+88.90	<b>PROP. CURVE 72</b> PI STA. = 124+03.99 $\Delta = 17^\circ 09' 22''$ (RT) $D = 57' 17' 45''$ $R = 100.00'$ $T = 15.08'$ $L = 29.94'$ $E = 1.13'$ P.C. STA. = 123+88.90 P.T. STA. = 124+18.84	<b>PROP. CURVE 73</b> PI STA. = 124+80.58 $\Delta = 26^\circ 02' 27''$ (LT) $D = 25^\circ 27' 53''$ $R = 225.00'$ $T = 52.03'$ $L = 102.26'$ $E = 5.94'$ P.C. STA. = 124+28.55 P.T. STA. = 125+30.81
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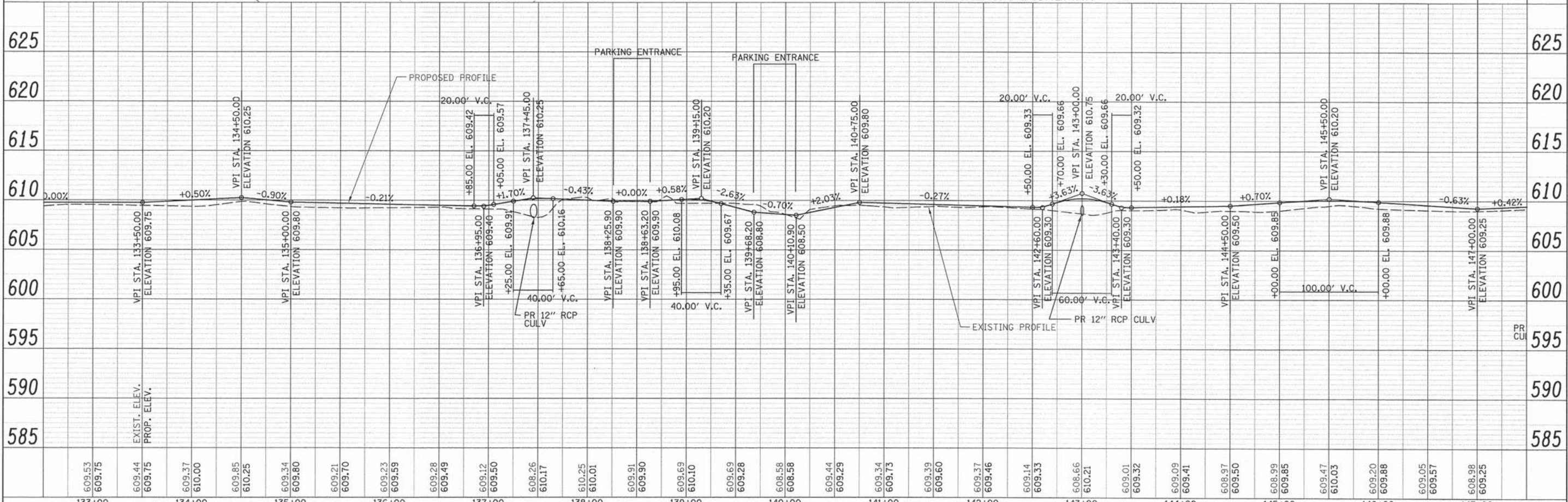
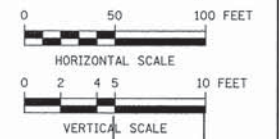
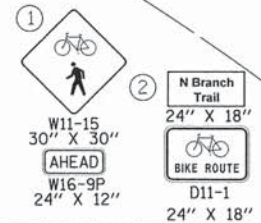
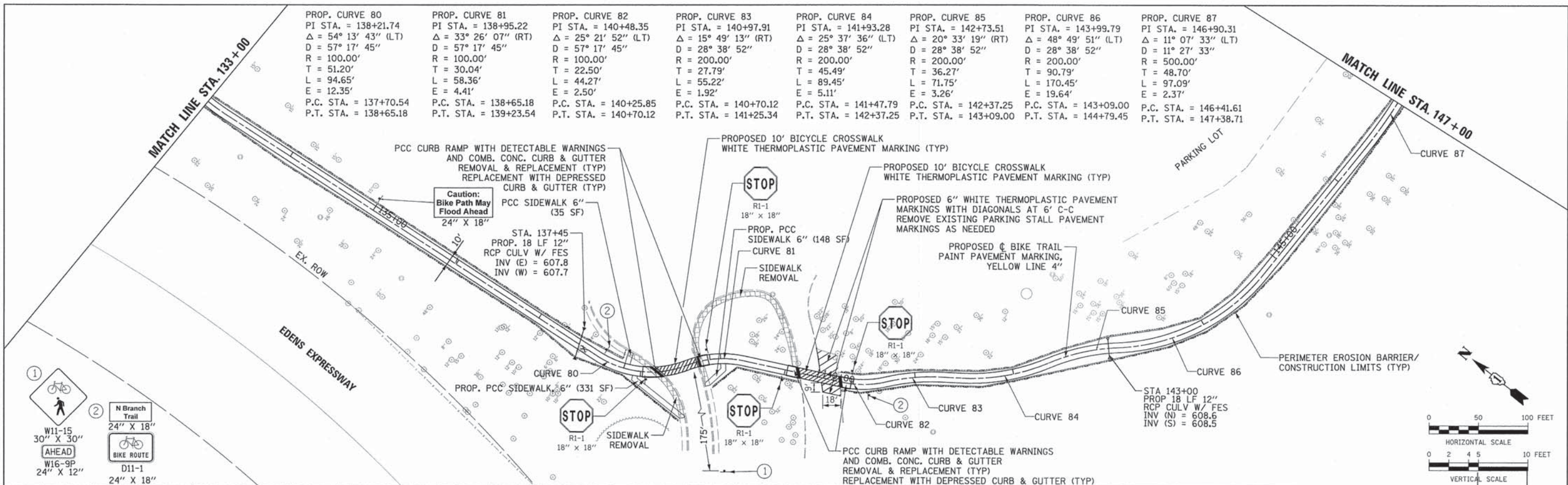
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	PLOT SCALE = 5/8" = 1' / in. PLOT DATE = 12/15/2014	SCALE: 1" = 50' DRAWING NO. 9 OF 12 STA. 118+00 TO STA. 133+00	ILLINOIS FED. AID PROJECT		



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<b>PROP. CURVE 80</b> PI STA. = 138+21.74 $\Delta = 54^\circ 13' 43''$ (LT) $D = 57' 17'' 45''$ $R = 100.00'$ $T = 51.20'$ $L = 94.65'$ $E = 12.35'$ P.C. STA. = 137+70.54 P.T. STA. = 138+65.18	<b>PROP. CURVE 81</b> PI STA. = 138+95.22 $\Delta = 33^\circ 26' 07''$ (RT) $D = 57' 17'' 45''$ $R = 100.00'$ $T = 30.04'$ $L = 58.36'$ $E = 4.41'$ P.C. STA. = 138+65.18 P.T. STA. = 139+23.54	<b>PROP. CURVE 82</b> PI STA. = 140+48.35 $\Delta = 25^\circ 21' 52''$ (LT) $D = 57' 17'' 45''$ $R = 100.00'$ $T = 22.50'$ $L = 44.27'$ $E = 2.50'$ P.C. STA. = 140+25.85 P.T. STA. = 140+70.12	<b>PROP. CURVE 83</b> PI STA. = 140+97.91 $\Delta = 15^\circ 49' 13''$ (RT) $D = 28^\circ 38' 52''$ $R = 200.00'$ $T = 27.79'$ $L = 55.22'$ $E = 1.92'$ P.C. STA. = 140+70.12 P.T. STA. = 141+25.34	<b>PROP. CURVE 84</b> PI STA. = 141+93.28 $\Delta = 25^\circ 37' 36''$ (LT) $D = 28^\circ 38' 52''$ $R = 200.00'$ $T = 45.49'$ $L = 89.45'$ $E = 5.11'$ P.C. STA. = 141+47.79 P.T. STA. = 142+37.25	<b>PROP. CURVE 85</b> PI STA. = 142+73.51 $\Delta = 20^\circ 33' 19''$ (RT) $D = 28^\circ 38' 52''$ $R = 200.00'$ $T = 36.27'$ $L = 71.75'$ $E = 3.26'$ P.C. STA. = 142+37.25 P.T. STA. = 143+09.00	<b>PROP. CURVE 86</b> PI STA. = 143+99.79 $\Delta = 48^\circ 49' 51''$ (LT) $D = 28^\circ 38' 52''$ $R = 200.00'$ $T = 90.79'$ $L = 170.45'$ $E = 19.64'$ P.C. STA. = 143+09.00 P.T. STA. = 144+79.45	<b>PROP. CURVE 87</b> PI STA. = 146+90.31 $\Delta = 11^\circ 07' 33''$ (LT) $D = 11^\circ 27' 33''$ $R = 500.00'$ $T = 48.70'$ $L = 97.09'$ $E = 2.37'$ P.C. STA. = 146+41.61 P.T. STA. = 147+38.71
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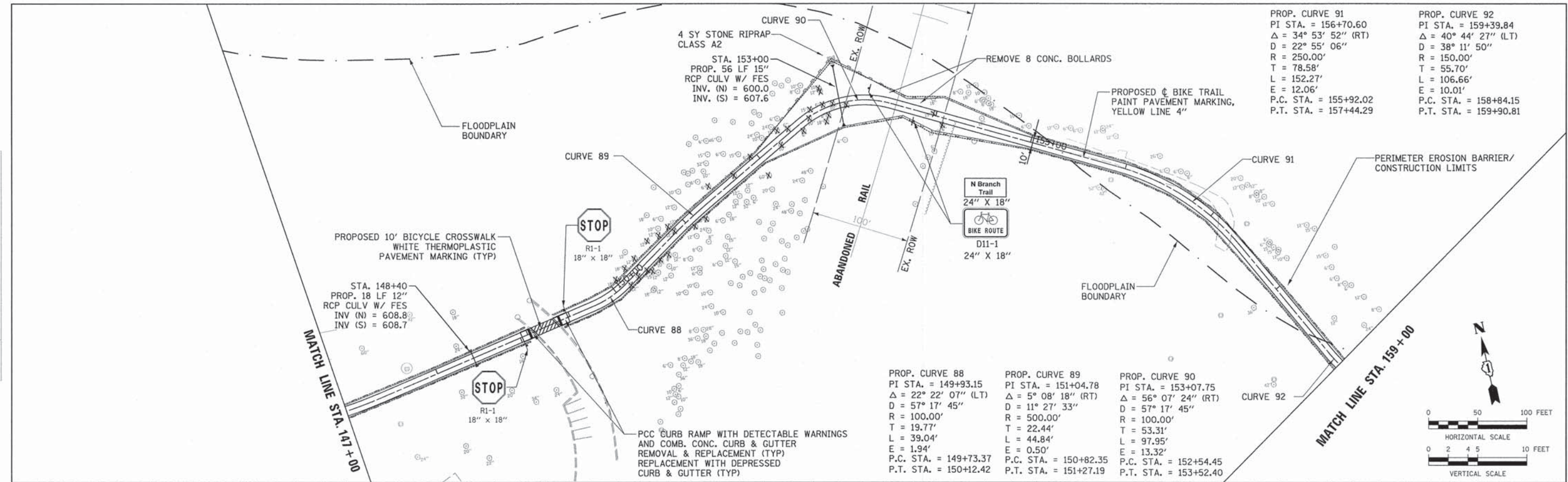


<b>URS</b> 100 SOUTH WALKER DRIVE, Suite 500 CHICAGO, IL 60606 (312) 939-1000	USER NAME = David.Landwehr DESIGNED - DRAWN - CHECKED - DATE = 10/20/14	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION</b> <b>PLAN AND PROFILE</b>	F.A.U. RTE. SECTION 08-F3000-21-BT COUNTY COOK SHEET NO. 129 OF 25 CONTRACT NO. 61A86
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SCALE: 1" = 50' DRAWING NO. 10 OF 12 STA. 133+00 TO STA. 147+00 ILLINOIS FED. AID PROJECT

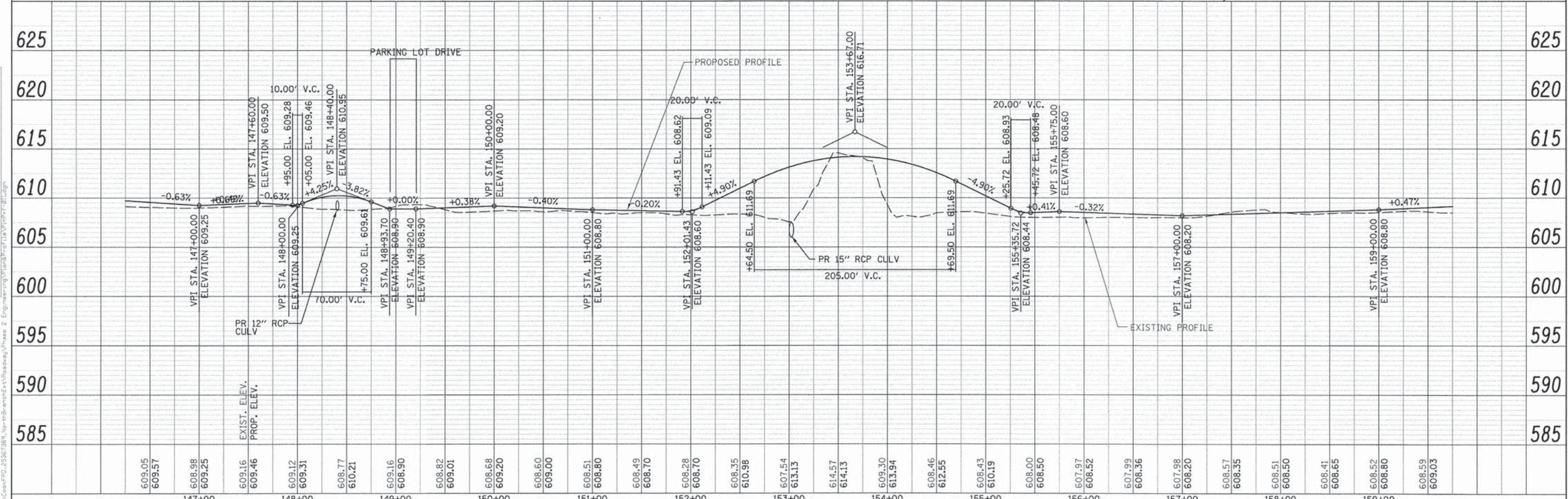
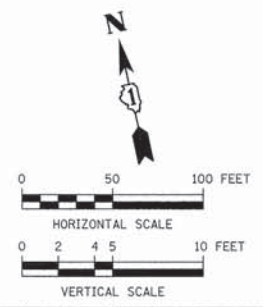
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PROP. CURVE 91	PROP. CURVE 92
PI STA. = 156+70.60	PI STA. = 159+39.84
$\Delta = 34^\circ 53' 52''$ (RT)	$\Delta = 40^\circ 44' 27''$ (LT)
D = 22° 55' 06"	D = 38° 11' 50"
R = 250.00'	R = 150.00'
T = 78.58'	T = 55.70'
L = 152.27'	L = 106.66'
E = 12.06'	E = 10.01'
P.C. STA. = 155+92.02	P.C. STA. = 158+84.15
P.T. STA. = 157+44.29	P.T. STA. = 159+90.81

PROP. CURVE 88	PROP. CURVE 89	PROP. CURVE 90
PI STA. = 149+93.15	PI STA. = 151+04.78	PI STA. = 153+07.75
$\Delta = 22^\circ 22' 07''$ (LT)	$\Delta = 5^\circ 08' 18''$ (RT)	$\Delta = 56^\circ 07' 24''$ (RT)
D = 57° 17' 45"	D = 11° 27' 33"	D = 57° 17' 45"
R = 100.00'	R = 500.00'	R = 100.00'
T = 19.77'	T = 22.44'	T = 53.31'
L = 39.04'	L = 44.84'	L = 97.95'
E = 1.94'	E = 0.50'	E = 13.32'
P.C. STA. = 149+73.37	P.C. STA. = 150+82.35	P.C. STA. = 152+54.45
P.T. STA. = 150+12.42	P.T. STA. = 151+27.19	P.T. STA. = 153+52.40

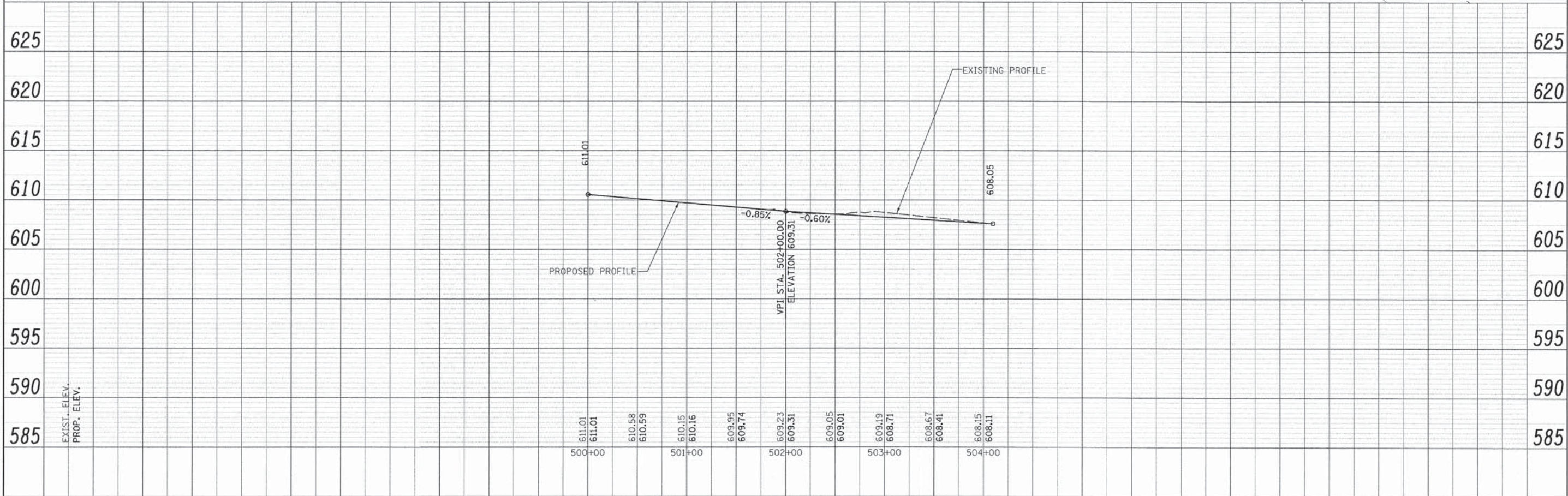
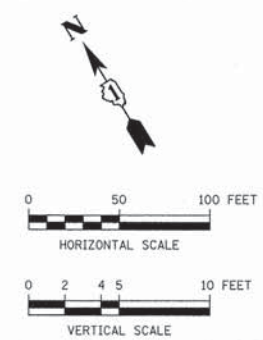
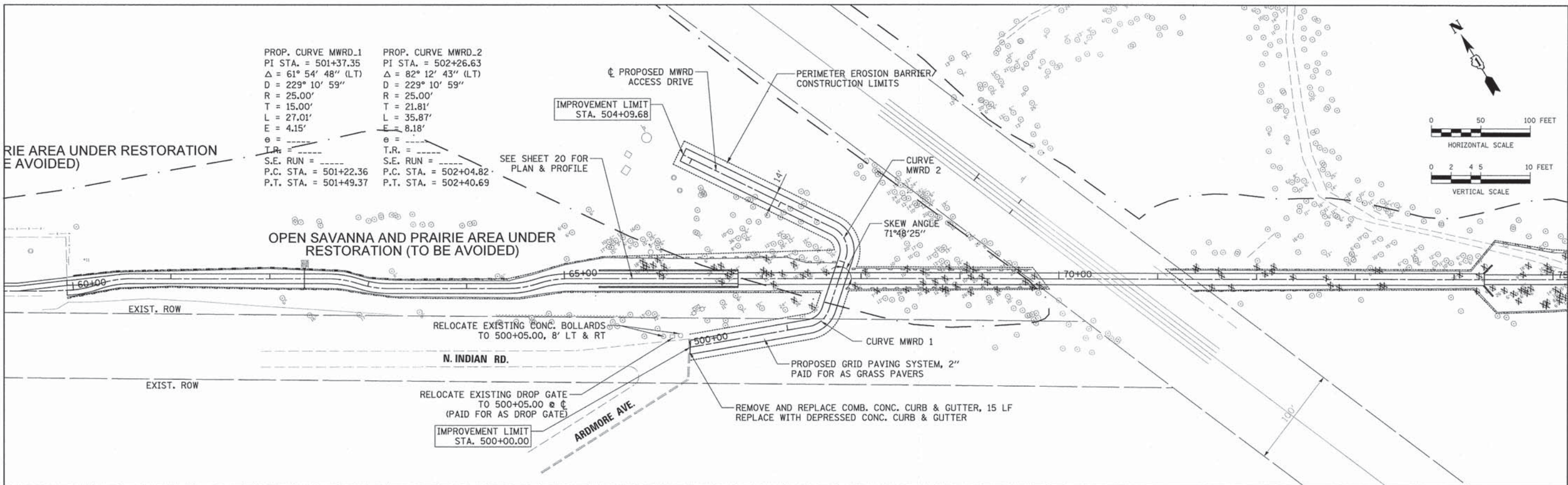


	USER NAME = David.Landwehr	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION</b> <b>PLAN AND PROFILE</b>	F.A.U. RTE. SECTION 08-F3000-21-BT	COUNTY TOTAL SHEETS COOK 129 26	CONTRACT NO. 61A86
	PLOT SCALE = 5/8" = 1' IN. PLOT DATE = 12/12/2014	CHECKED - DATE = 10/20/14	REVISED - REVISED -					



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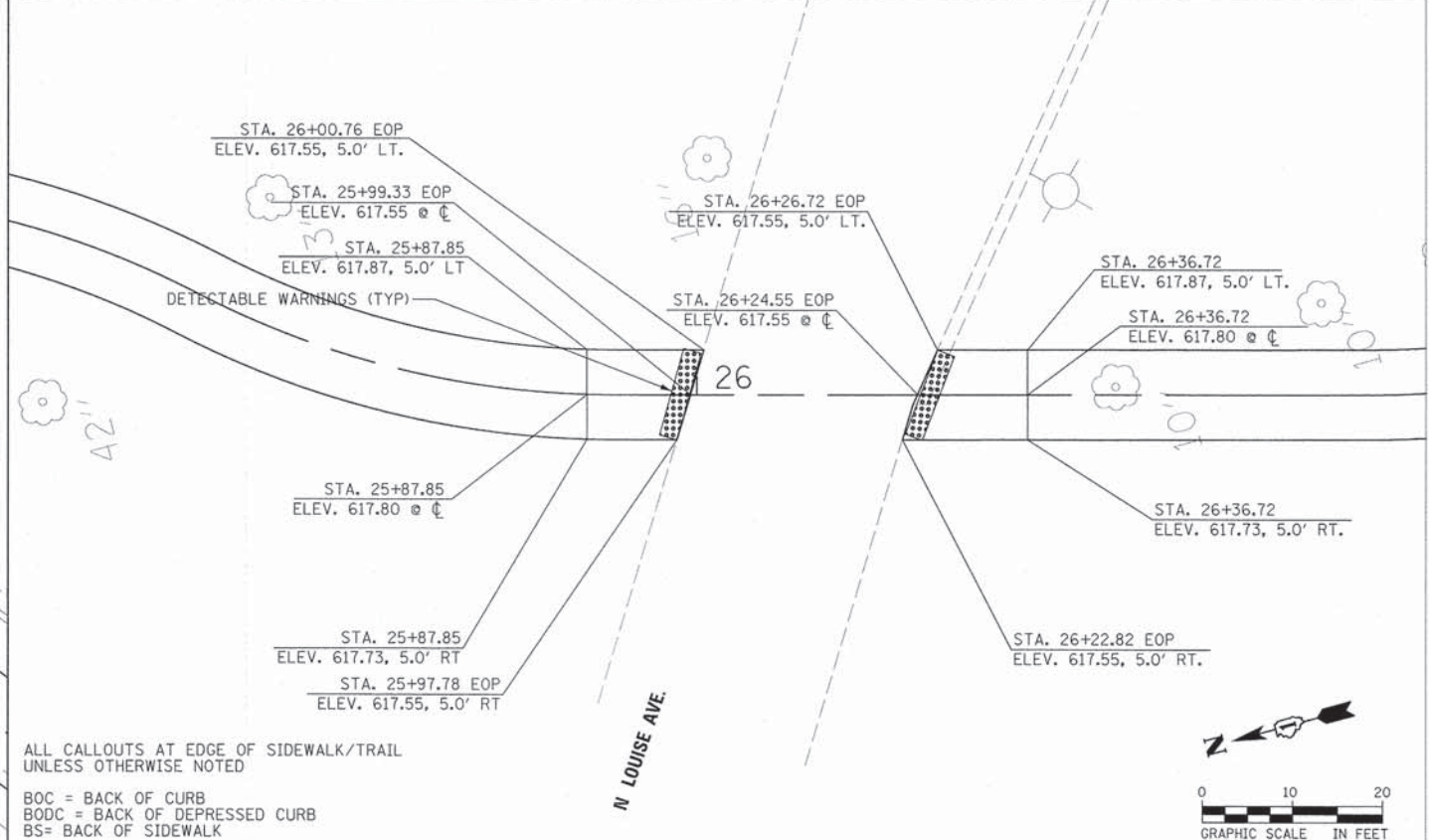
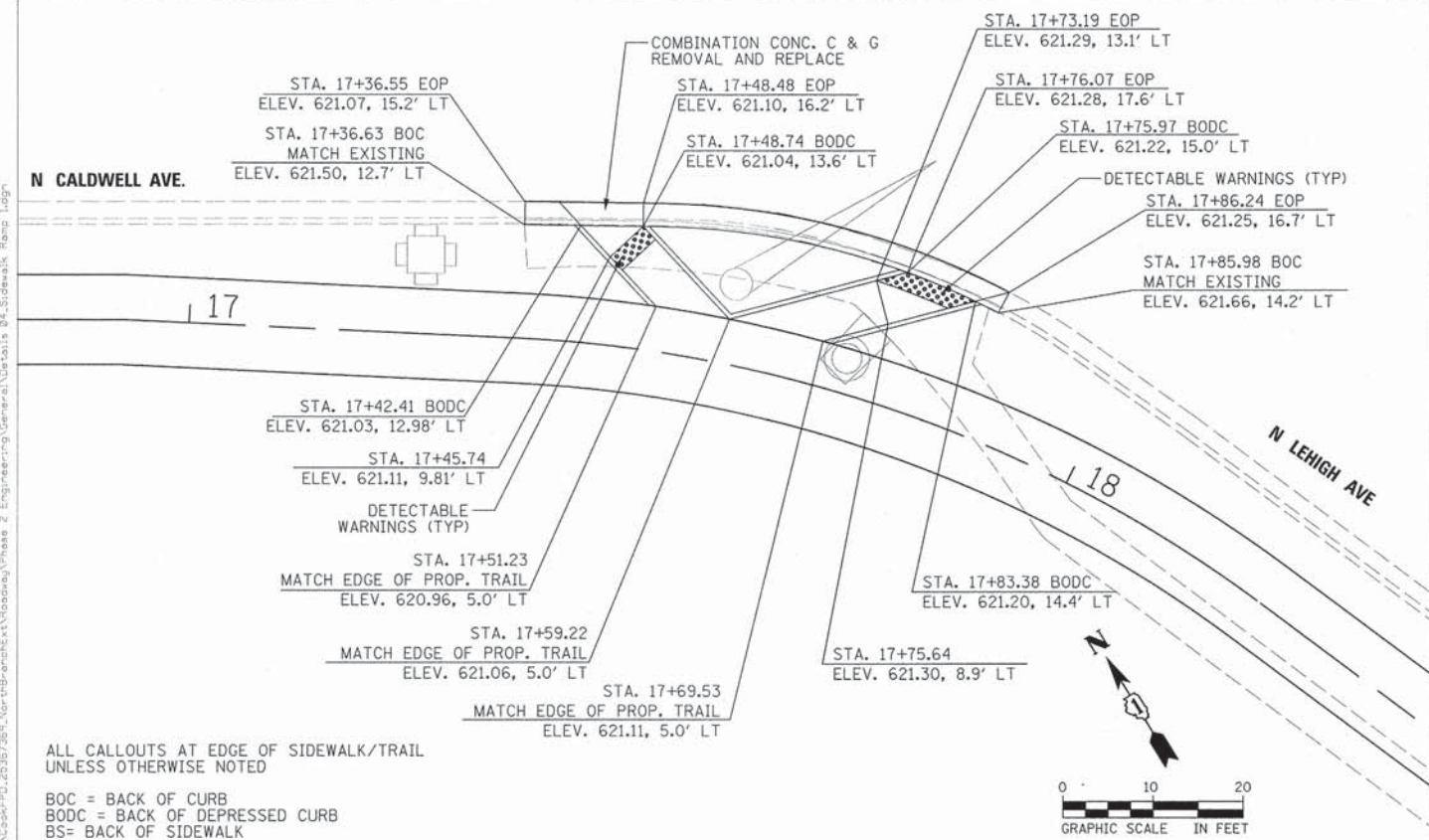
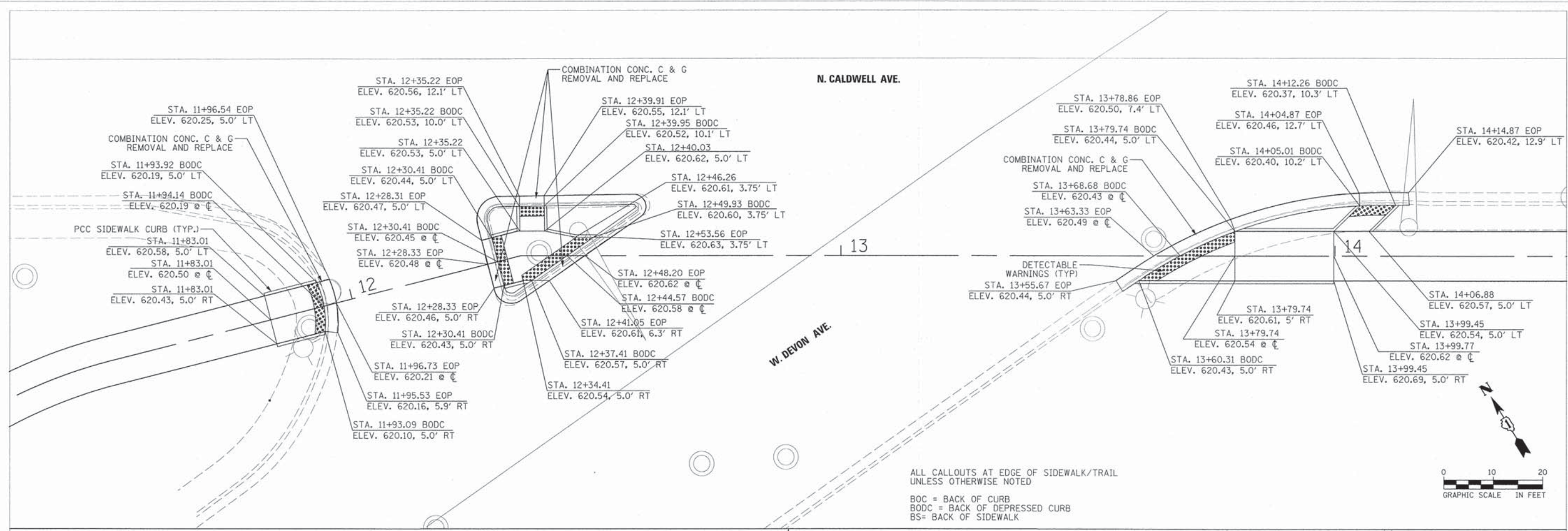
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 PLAN AND PROFILE

SCALE: 1" = 50' DRAWING NO. 12 OF 12 STA. 159+00 TO STA. 165+93.75

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	28
CONTRACT NO. 61A86				
ILLINOIS FED. AID PROJECT				



ALL CALLOUTS AT EDGE OF SIDEWALK/TRAIL  
UNLESS OTHERWISE NOTED

BOC = BACK OF CURB  
BODC = BACK OF DEPRESSED CURB  
BS = BACK OF SIDEWALK

ALL CALLOUTS AT EDGE OF SIDEWALK/TRAIL  
UNLESS OTHERWISE NOTED

BOC = BACK OF CURB  
BODC = BACK OF DEPRESSED CURB  
BS = BACK OF SIDEWALK

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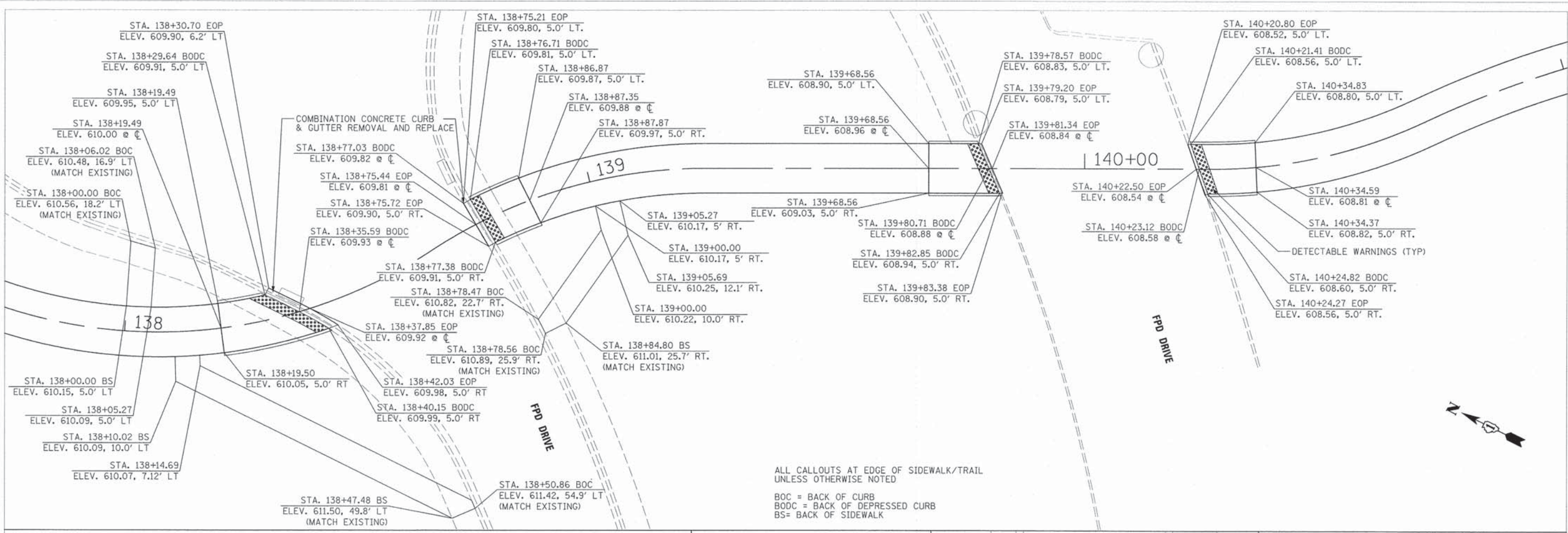
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
SIDEWALK /ADA RAMP GRADING DETAILS

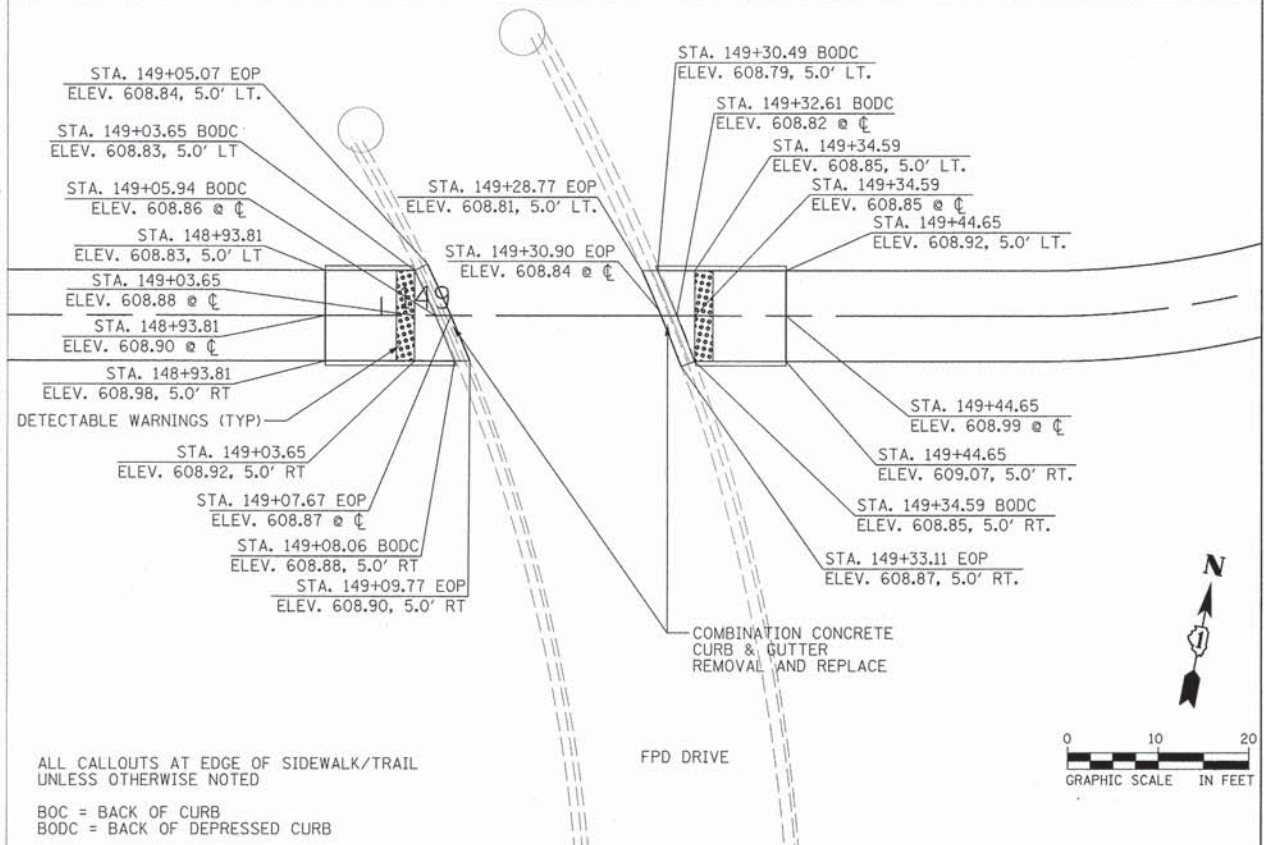
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	08-F3000-21-BT	COOK	129	29
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 61A86	

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

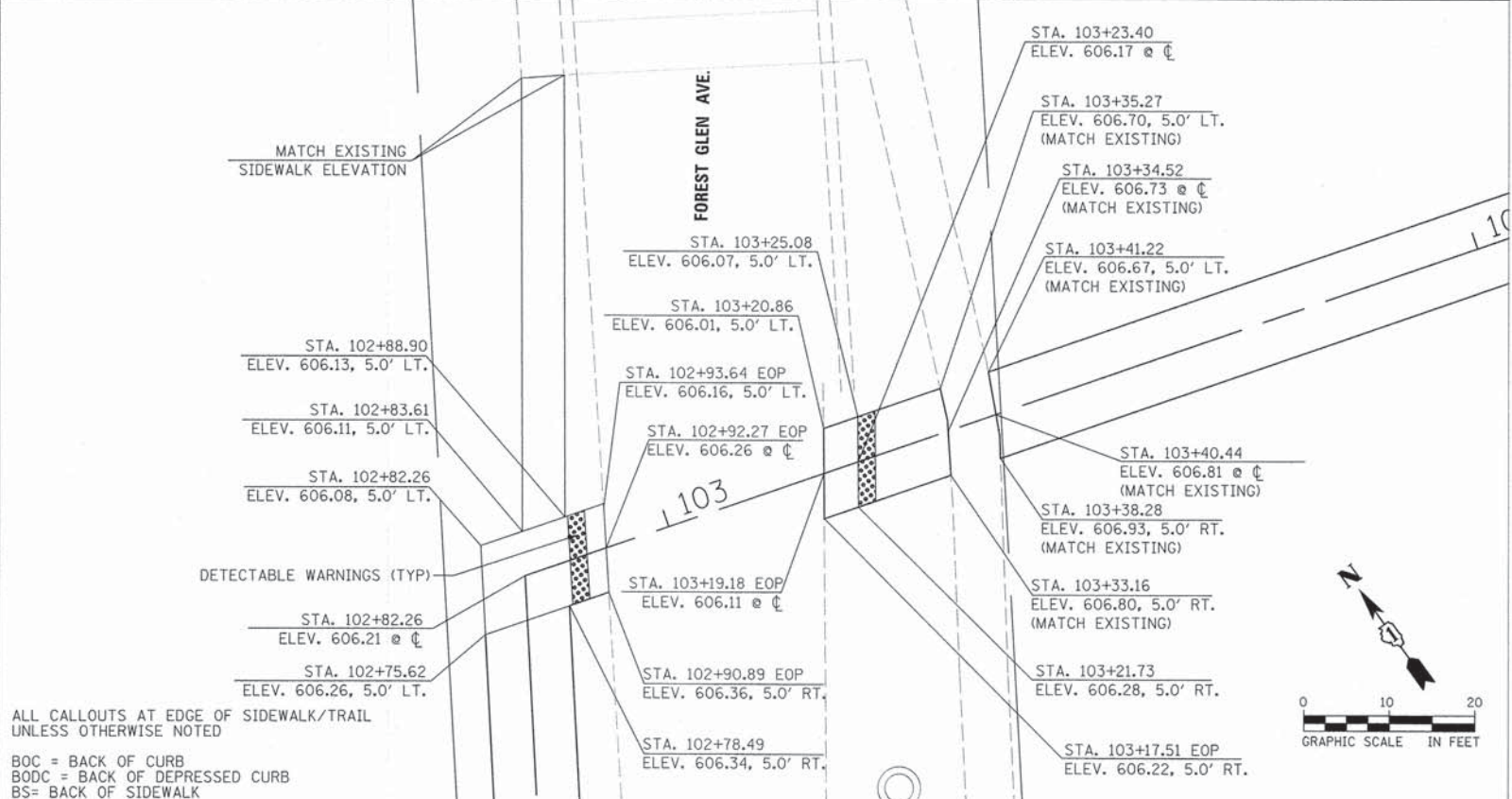




ALL CALLOUTS AT EDGE OF SIDEWALK/TRAIL UNLESS OTHERWISE NOTED  
 BOC = BACK OF CURB  
 BODC = BACK OF DEPRESSED CURB  
 BS = BACK OF SIDEWALK



ALL CALLOUTS AT EDGE OF SIDEWALK/TRAIL UNLESS OTHERWISE NOTED  
 BOC = BACK OF CURB  
 BODC = BACK OF DEPRESSED CURB



ALL CALLOUTS AT EDGE OF SIDEWALK/TRAIL UNLESS OTHERWISE NOTED  
 BOC = BACK OF CURB  
 BODC = BACK OF DEPRESSED CURB  
 BS = BACK OF SIDEWALK

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	31
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

POSSIBLE COFFERDAM ALTERNATE

WATER INFLATED DAM  
PRODUCT SPECIFICATION

(AQUA-BARRIER™ OR EQUIVALENT)

1.1 SPECIFICATION

A WATER -INFLATED TEMPORARY DAM (AQUA-BARRIER™ OR EQUIVALENT) SHALL CONSIST OF THE FOLLOWING:

- 1) THE WATER INFLATED DAM WILL CONSIST OF A SELF CONTAINED, SINGLE TUBE WITH AN INNER RESTRAINT BAFFLE(S)/DIAPHRAGM(S) STABILIZATION SYSTEM. THE WATER-INFLATED DAM MUST HAVE THE ABILITY TO STAND ALONE, WITHOUT ANY ADDITION EXTERNAL MECHANICAL OR GRAVITATIONAL STABILIZATION DEVICES, AS A POSITIVE WATER BARRIER AND WATER MANAGEMENT SYSTEM.
- 2) THE WATER-INFLATED DAM SHALL BE PRODUCED FROM HEAVY GAUGE POLYVINYL CHLORIDE (PVC) REINFORCED WITH POLYESTER. THE PVC FABRIC USED TO CREATE THE INFLATABLE DAM WILL BE INFELD REPAIRABLE UTILIZING A VINYL ADHESIVE AND PATCH MATERIAL.
- 3) THE WATER-INFLATED DAM MUST MAINTAIN MECHANICAL STABILITY IN ADDITION TO PROVIDING ANTI-ROLLING WHEN EXPOSED TO UNEVEN HYDROSTATIC PRESSURE FROM EITHER SIDE.
- 4) THE SELF-CONTAINED WATER INFLATED DAM SHALL HAVE THREADED FILL PORTS AND DRAIN PORTS FOR RAPID INFLATION AND DRAINING. THE DAM WILL BE EQUIPPED WITH END LIFTING LOOPS USED TO CONTROL THE DAM WITH EQUIPMENT DURING THE INSTALLATION AND REMOVAL PROCESS.
- 5) METHOD FOR CONNECTING THE INDIVIDUAL UNITS TOGETHER WILL CONSIST OF OVERLAPPING THE END OF THE UNITS A SPECIFIC LENGTH WHICH WILL CREATE A WATERTIGHT CONNECTION. NO OTHER DEVICES OR METHODS FOR CONNECTING THE BARRIERS ARE REQUIRED.

1.2 PRODUCT DESCRIPTION

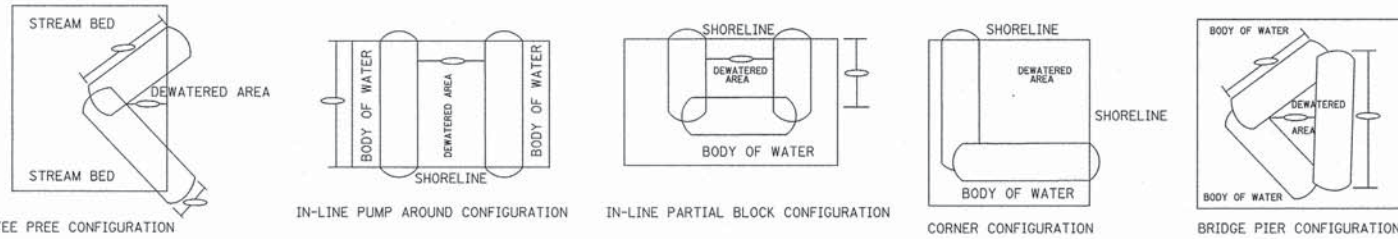
WATER-INFLATED DAMS ARE USED TO CONTROL INVASIVE WATER IN FLOODWATER SITUATIONS, AS A MEANS OF WATER MANAGEMENT TO PROVIDE ACCESS TO UNDERWATER AREAS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS, HAZARDOUS LIQUID CONTAINMENT, SEDIMENT RETENTION IN ENVIRONMENTALLY SENSITIVE AREAS IN ADDITION TO A CONTINUALLY EXPANDING LIST OF WATER CONTROL RELATED APPLICATIONS.

1.3 DAM SIZE REQUIREMENTS

THE WATER-INFLATED TEMPORARY DAM HEIGHT SHALL BE DETERMINED AS FOLLOWS:

- 1) STATIC WATER HEIGHT CONDITIONS SHALL NOT EXCEED 75% OF THE PROPERLY FILLED HEIGHT OF THE BARRIER.
- 2) DYNAMIC WATER HEIGHT CONDITIONS SHALL NOT EXCEED STATED VALUE DURING HYDRODYNAMIC INSTALLATION PROCEDURES (SEE DYNAMIC INSTALLATION INSTRUCTIONS FOR COMPLETE LIST OF REQUIREMENTS.)
- 3) INSTALLATION SIDE CRITERIA ARE REQUIRED FOR ASSESSMENT OF ALL RELEVANT FACTORS.

EXCESS SLOPE, HIGH WATER VELOCITIES, DYNAMIC LOADS RESULTING FROM WAVE ACTIONS, MOUNTING SURFACE IRREGULARITIES, AND CHANGES IN INTERRELATED HYDROLOGICAL CONDITIONS CAN INCREASE THE REQUIRED WATER INFLATED DAM HEIGHT VERSUS RETENTION HEIGHT REQUIREMENTS.



AQUA-BARRIER™ CONNECTION REQUIREMENTS

EACH INFLATION AQUA-BARRIER SECTION IS STRAIGHT WITHOUT THE ABILITY TO BEND. WHEN JOINING AQUA-BARRIERS, AN OVERLAPPING TECHNIQUE IS USED. SIMPLY PLACE THE BARRIER TO BE INFLATED ON TOP OF THE END OF THE INFLATED BARRIER AND BEGIN THE INFLATION PROCESS. THE AMOUNT OF OVERLAP WILL BE DETERMINED BY BARRIER HEIGHT.

WHEN CONNECTING AQUA-BARRIERS A MINIMUM OF 8FT TO 12FT LOSS OF BARRIER LENGTH WILL BE EXPERIENCED. ALLOWANCES SHOULD BE MADE FOR THE LOSS IN LENGTH OF THE AQUA-BARRIERS DUE TO THE OVERLAP CONNECTION.

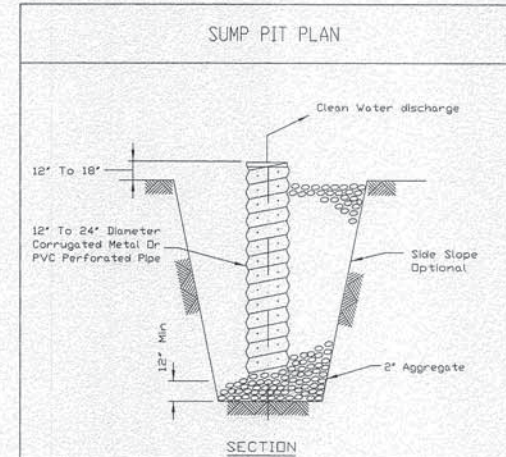
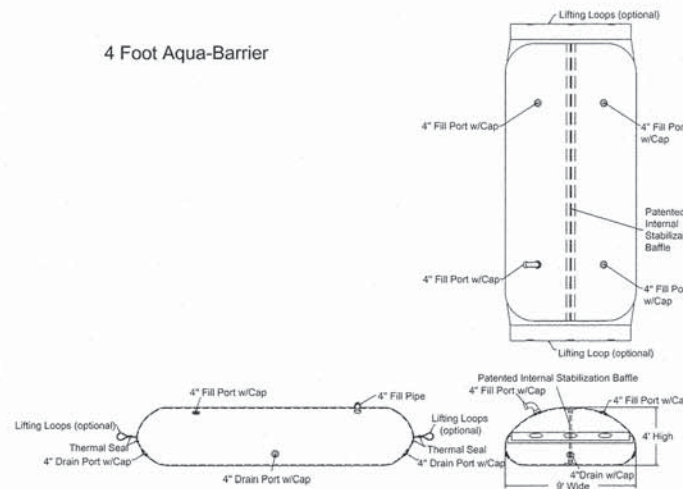
AQUA-BARRIER INFLATED HEIGHT (FT)	OVERLAP LENGTH (FT)
2	3
3	4.5
4	6
5	7.5
6	9
7	10.5
8	12

AQUA-BARRIER STANDARD HEIGHTS & DIMENSIONS

INFLATED HEIGHT (FT)	LAYFLAT WIDTH EMPTY (FT)	LAYFLAT WIDTH INFLATED (FT)	GALLONS PER LINEAR FOOT	100 FT SECTION WEIGHT	MAXIMUM DEPTH OF WATER (IM)
2 (22 OZ) (30 OZ)	5	4'	60	188 320	18
3 (22 OZ) (30 OZ)	8.5	7	158	270 526	27
4 (22 OZ) (30 OZ)	12	10	256	322 600	36
5 (30 OZ)	15	12.5	390	931	45
6 (30 OZ)	18	15	564	1098	54
7 (30 OZ)	21	17.5	770	1224	63
8 (30 OZ)	24	20	1007	1620	72

\*\* THIS DEPTH OF WATER REPRESENTS 75% OF THE HEIGHT OF A FULLY INFLATED AQUA-BARRIER. IT IS REQUIRED THAT A MINIMUM 25% FREEBOARD CAPACITY BE MAINTAINED DURING ALL PHASES OF A PROJECT. EXCESS SLOPE AND GRADE, SOIL COMPOSITION, MOVING WATER, AND RELATED HYDROLOGICAL CRITERIA MAY INCREASE OR DECREASE THE ABILITY OF AN AQUA-BARRIER TO PERFORM AS PROJECTED.

4 Foot Aqua-Barrier



- NOTES:
1. Pit dimensions are optional.
  2. The standpipe will be constructed by perforating a 12"-24" diameter corrugated metal or PVC pipe.
  3. A base of 2" aggregate will be placed in the pit to a minimum depth of 12". After installing the standpipe, the pit surrounding the standpipe will then be backfilled with 2" aggregate.
  4. The standpipe will extend 12" to 18" above the lip of the pit.
  5. If discharge will be pumped directly to a storm drainage system, the standpipe will be wrapped with filter fabric before installation.
  6. If desired, 1/4"-1/2" hardware cloth may be placed around the standpipe prior to attaching the filter fabric. This will increase the rate of water seepage into the pipe.

REFERENCE Project	Date	 NATIONAL RESOURCE CONSERVATION SERVICE	STANDARD DWG. NO.
Designed	Date		IL-650
Checked	Date		SHEET 1 OF 1
Approved	Date		DATE 8-11-94

PRACTICE STANDARD  
SUMP PIT

CODE 950

DEFINITION

A TEMPORARY PIT WHICH IS CONSTRUCTED TO TRAP AND FILTER WATER FOR PUMPING WATER INTO A SUITABLE DISCHARGE AREA.

PURPOSE

THE PURPOSE OF THIS PRACTICE IS TO REMOVE EXCESSIVE WATER IN A MANNER THAT IMPROVES THE QUALITY OF THE WATER BEING PUMPED.

CONDITIONS WHERE PRACTICE APPLIES

SUMP PITS ARE CONSTRUCTED WHEN WATER COLLECTS DURING THE EXCAVATION. THIS PRACTICE IS PARTICULARLY USEFUL IN URBAN AREAS DURING EXCAVATION FOR BUILDING FOUNDATIONS.

CRITERIA

A PERFORATED VERTICAL STANDPIPE IS PLACED IN THE CENTER OF THE PIT TO COLLECT FILTERED WATER. THE STANDPIPE WILL BE A PERFORATED 12 TO 24 - INCH DIAMETER CORRUGATED METAL OR PVC PIPE. WATER IS THEN PUMPED FROM THE CENTER OF THE PIPE TO A SUITABLE DISCHARGE AREA. THE PIT WILL BE FILLED WITH COURSE AGGREGATE MEETING THE REQUIREMENTS FOR IDOT STANDARDS FOR GRADATIONS OF CA-2 OR CA-4.

CONSIDERATIONS

DISCHARGE OF WATER PUMPED FROM THE STANDPIPE SHOULD BE TO A SUITABLE PRACTICE SUCH AS PRACTICE STANDARD IMPOUNDMENT STRUCTURE-ROUTED 842, PORTABLE SEDIMENT TANK 895, TEMPORARY SEDIMENT TRAP 960, OR STABILIZED AREA.

IF WATER FROM THE SUMP PIT WILL BE PUMPED DIRECTLY TO A STORM DRAINAGE SYSTEM, FILTER FABRIC WILL BE WRAPPED AROUND THE STANDPIPE TO ENSURE CLEAN IF WATER DISCHARGE. THE FABRIC, IF USED, SHALL MEET THE REQUIREMENTS AS SHOWN IN MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2 CLASS 1 WITH AN EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NON-WOVEN OR 50 FOR WOVEN. IT IS RECOMMENDED THAT 1/4 TO 1/2 INCH HARDWARE CLOTH WIRE BE WRAPPED AROUND AND SECURED TO THE STANDPIPE TO ATTACHING THE FILTER FABRIC. THIS WILL INCREASE THE RATE OF WATER SEEPAGE INTO THE STANDPIPE.

PLANS AND SPECIFICATIONS

PLANS AND SPECIFICATIONS FOR INSTALLING AND UTILIZING SUMP PITS SHALL BE IN KEEPING WITH STANDARD AND SHALL DESCRIBE THE REQUIREMENTS FOR APPLYING THE PRACTICE TO ACHIEVE ITS INTENDED PURPOSE.

THE CONTRACTOR OR RESPONSIBLE REVIEWING AUTHORITY WILL DETERMINE THE NUMBER OF SUMP PITS AND THEIR LOCATIONS.

STANDARD DRAWING IL-650 SUMP PIT PLAN MAY BE USED AS A PLAN SHEET.

ALL PLANS SHALL INCLUDE THE INSTALLATION, INSPECTION, AND MAINTENANCE SCHEDULES WITH THE RESPONSIBLE PARTY IDENTIFIED.

OPERATION AND MAINTENANCE

THE SUMP PIT MAY HAVE TO BE REPLACED IF THE PIT AND FILTER FABRIC PLUGS WITH SEDIMENT.

ALL WORK DESCRIBED ABOVE WILL NOT BE PAID FOR SEPARATELY BUT RATHER CONSIDERED INCIDENTAL TO THE CONTRACT.

NRCS IL

AUGUST 1994

FILE NAME = G:\Cook\FPD\_20387869\_Non-to-Branche\Roadway\Phase 2\_Engineering\General\Details 05\_Sidewalk\_Ramp\_4.dgn



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 PLOT DATE = 12/11/2014

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DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

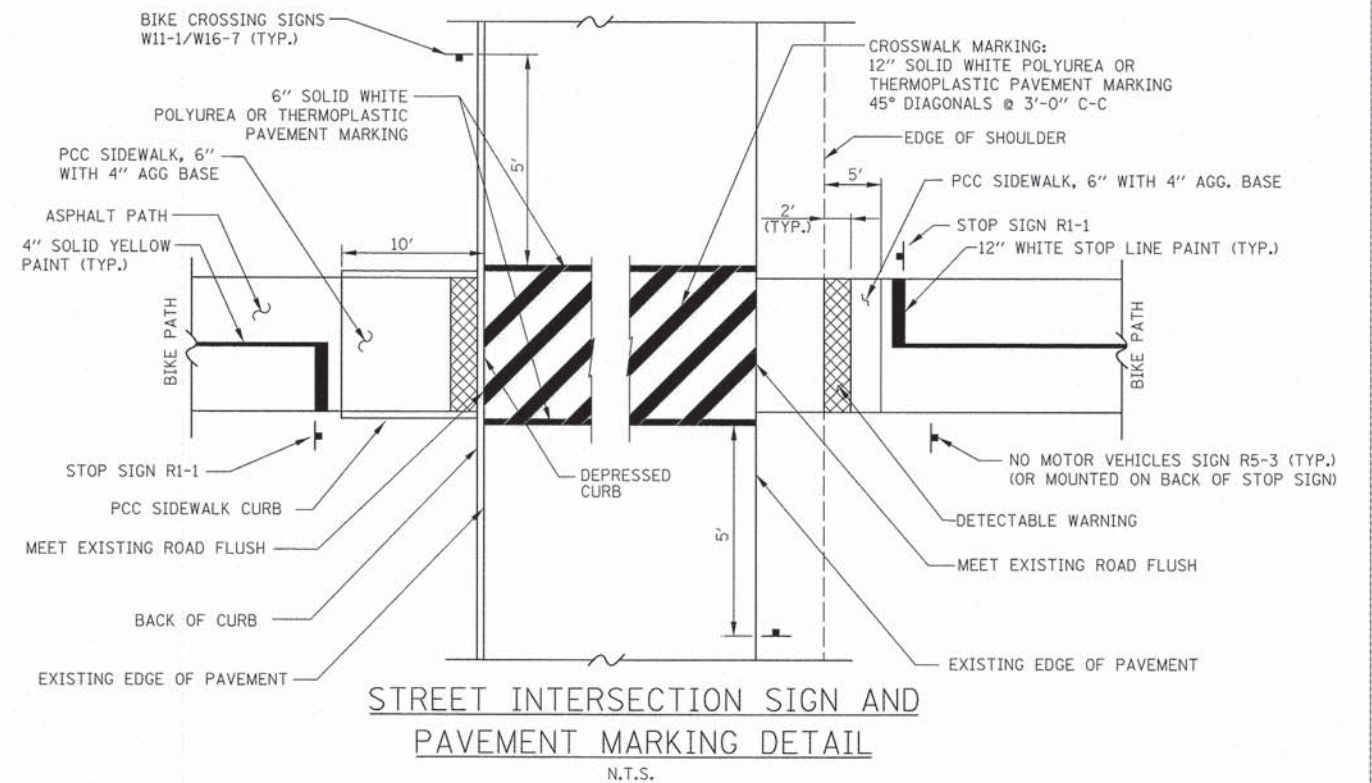
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION

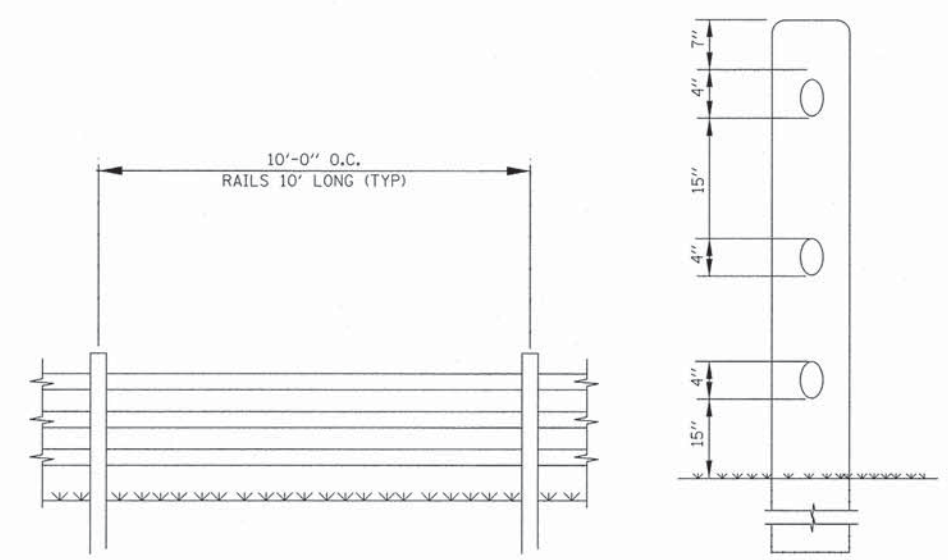
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61A86				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

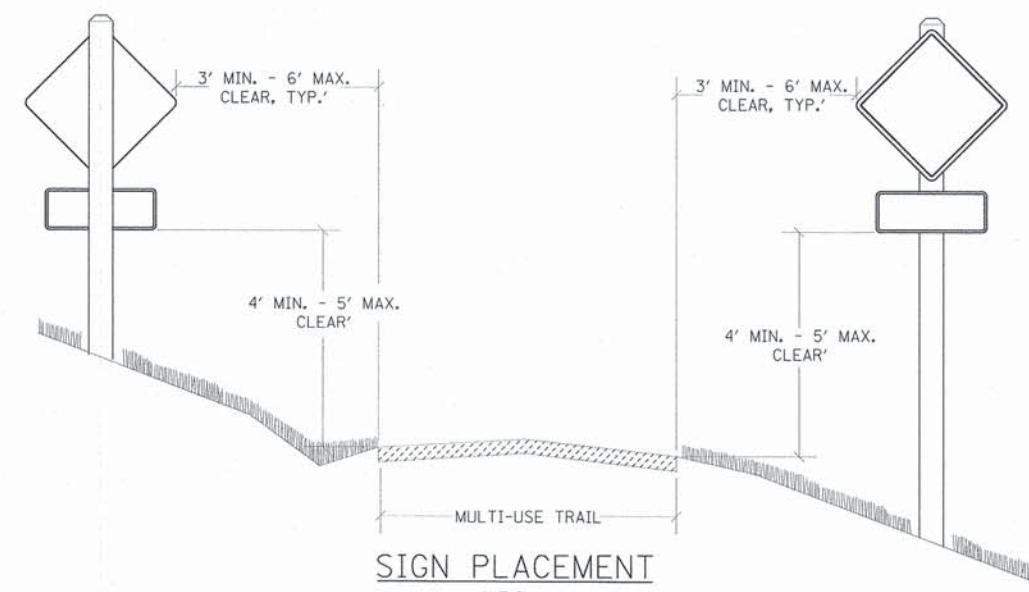




STREET INTERSECTION SIGN AND PAVEMENT MARKING DETAIL  
N.T.S.



RUSTIC RAIL FENCE DETAIL



SIGN PLACEMENT  
N.T.S.

FILE NAME: G:\Cook\FPD\_26367893\_NorthBranchEx\Roadway\Phase 2\_Engineering\General\22-Miscellaneous\_Details.dgn



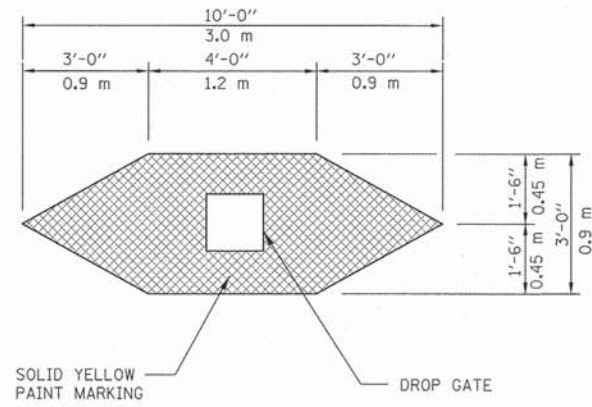
USER NAME: David.Landwehr	DESIGNED: PMV	REVISED:
PLOT SCALE: 1/8"=1'-0"	DRAWN: PMV	REVISED:
PLOT DATE: 12/11/2014	CHECKED: NPP	REVISED:
	DATE: 10/20/14	REVISED:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

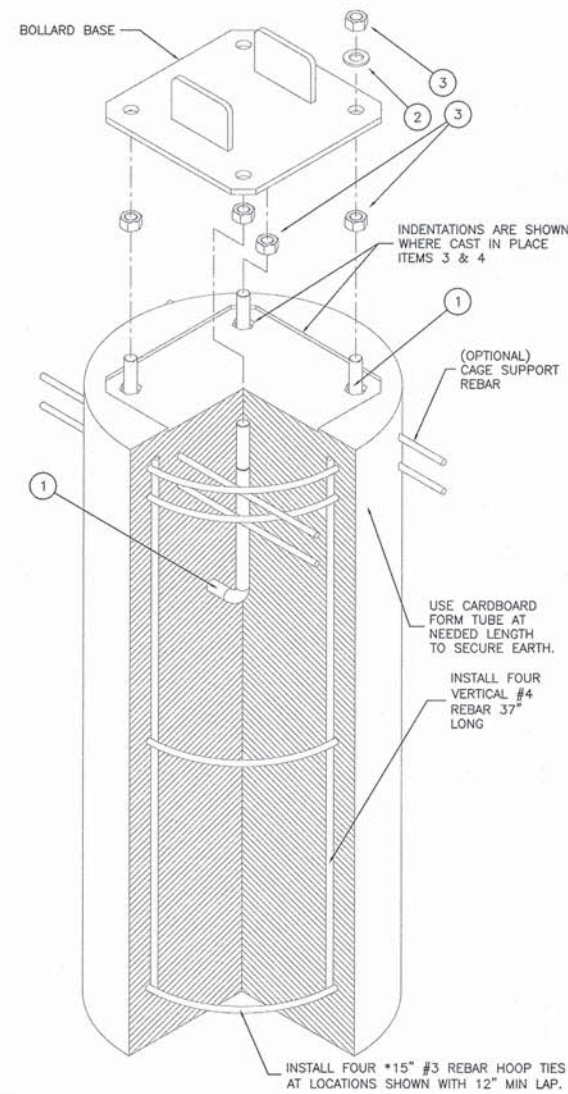
NORTH BRANCH BIKE TRAIL EXTENSION  
MISCELLANEOUS DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61A86				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

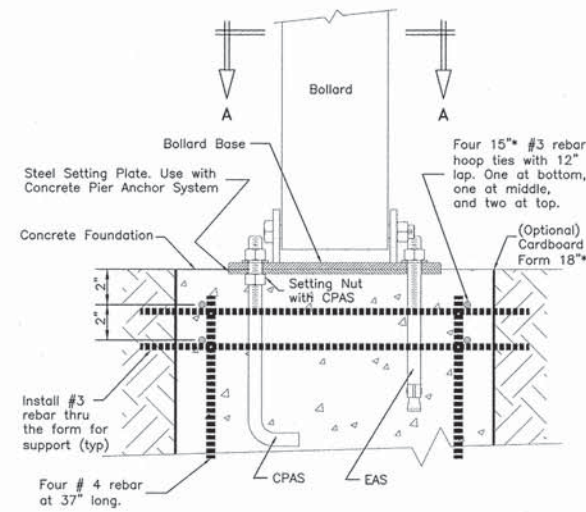
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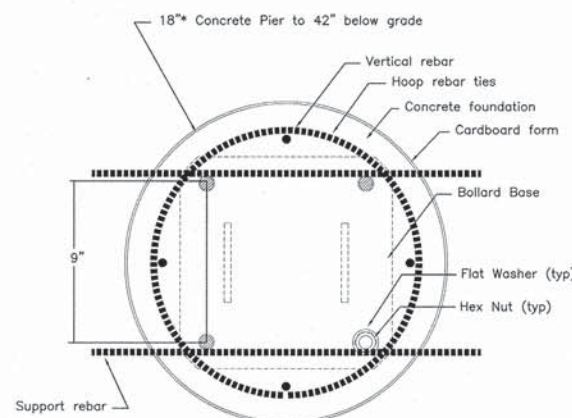
**DROP GATE MARKING DETAIL**  
N.T.S.



**CONCRETE PIER ANCHOR SYSTEM (CPAS)**

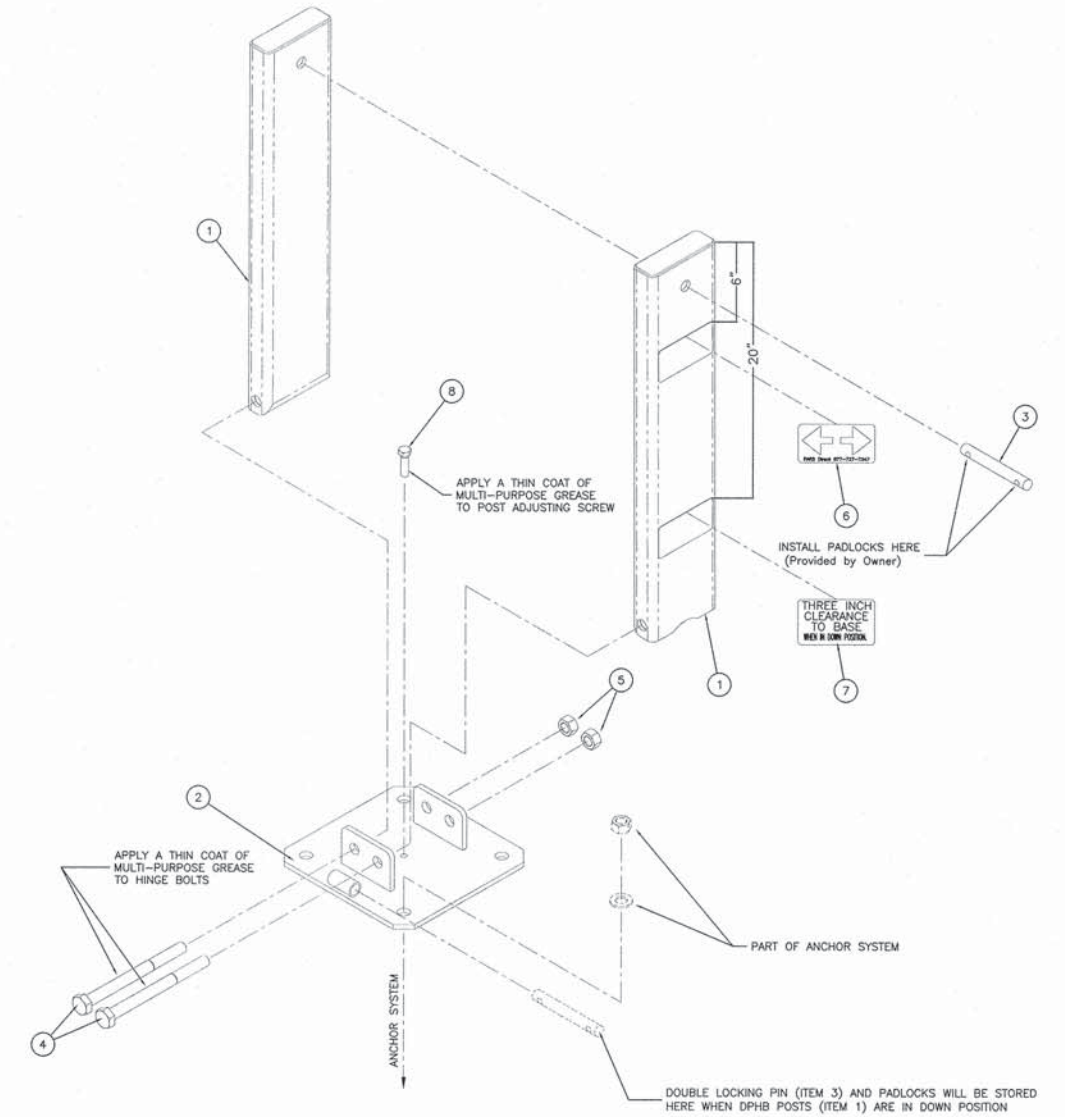


**FRONT ELEVATION SECTION**



**PLAN SECTION "A-A"**

**DROP GATE, INSTALLATION DETAIL**  
N.T.S.



**DROP GATE DETAIL**

FILE NAME: D:\Coop\FPO\_28367364\_NorthBranch\Phase 2 Engineering\Drawings\Details\Details.dgn



USER NAME = David.Landwehr  
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 PLOT DATE = 12/11/2014

DESIGNED - -  
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 CHECKED - -  
 DATE - -

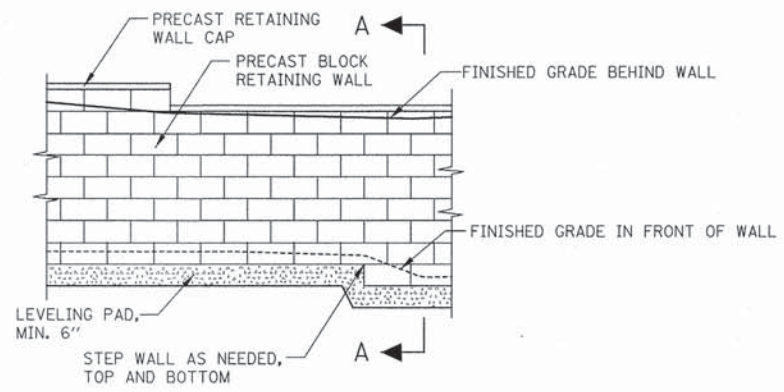
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION  
 MISCELLANEOUS DETAILS**

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

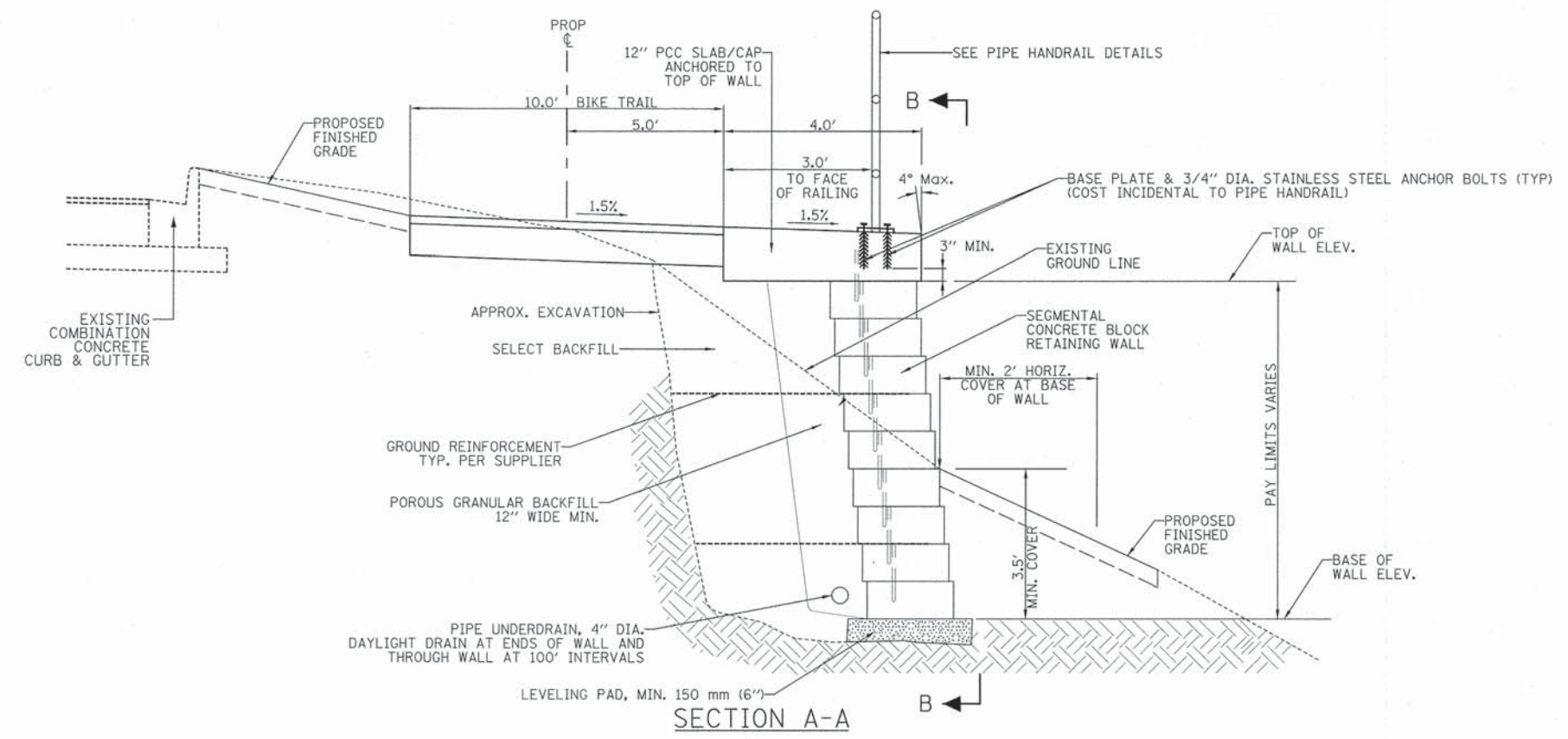
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	08-F3000-21-BT	COOK	129	34
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



SECTION B-B  
ELEVATION

NOTES

1. THE CONTRACTOR SHALL SUBMIT DESIGN, CONSTRUCTION PLANS WITH MATERIAL INFORMATION & SHOP DRAWINGS FOR CONNECTION DETAILS SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF ILLINOIS TO THE ENGINEER FOR APPROVAL BEFORE ORDERING MATERIALS.
2. RETAINING WALL EQUIVALENT FLUID PRESSURE = 50(PCF)
3. REINFORCING BARS SHALL BE GRADE 60
4. GROUT MORTAR, f'm = 2500 psi (MIN.)
5. THE DESIGN OF THE RETAINING WALL SHALL BE IN COMPLIANCE WITH THE GUIDELINES FOR THE DESIGN OF MECHANICALLY STABILIZED EARTH WALLS AS DEVELOPED BY AASHTO-AGC-ARTA JOINT COMMITTEE TASK FORCE 27 GROUND MODIFICATION SYSTEMS.
6. EXCAVATION, LEVELING PAD, BACKFILL, PIPE UNDERDRAIN, GROUND REINFORCEMENT, GROUND RESTORATION, AND SEEDING OF RESTORED GROUND ARE INCLUDED IN COST OF CONCRETE BLOCK RETAINING WALL.



SEGMENTAL CONCRETE BLOCK  
RETAINING WALL DETAIL  
N.T.S.  
STA. 37+50 TO STA. 39+60

SEGMENTAL CONCRETE BLOCK  
RETAINING WALLS SITING DATA

	STATION	TOP OF WALL ELEV. (FEET)	BASE OF WALL ELEV. (FEET)	WALL HEIGHT (FEET)
WALL AT CENTRAL AVE.	37+50	613.36	608.00	5.36
	38+00	612.36	603.00	9.36
	38+50	611.71	603.40	8.31
	39+00	611.41	602.14	9.27
	39+60	611.40	603.50	7.90

FILE NAME: G:\Cook\FPD\_28387056\Nor-Branch\Bike\Roadway\Phase 2\Engineering\General\Roadway\Drawings\Detail\Detail.dgn



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 PLOT DATE = 12/11/2014

DESIGNED - PMV  
 DRAWN - PMV  
 CHECKED - NPP  
 DATE - 10/20/14

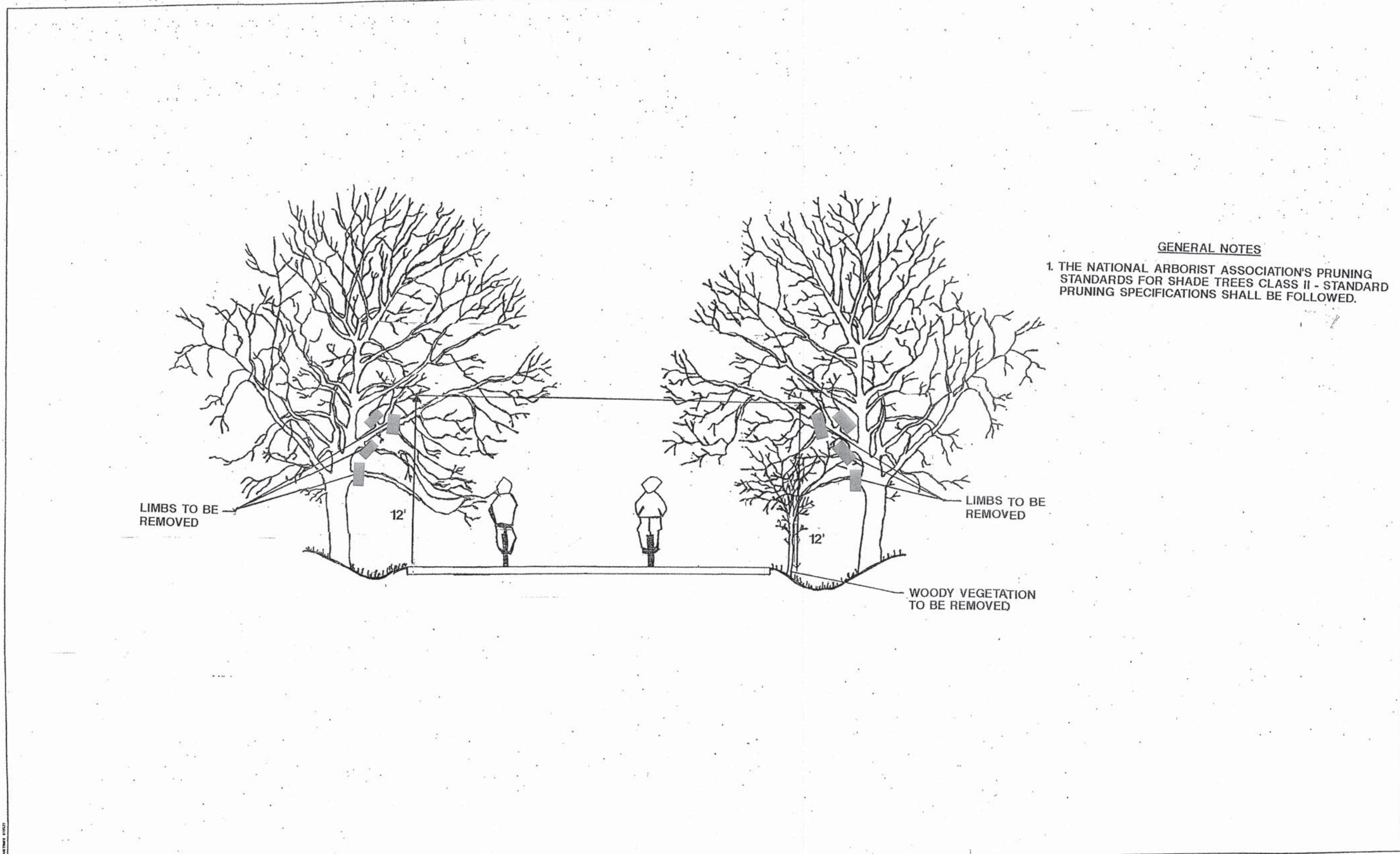
REVISED -  
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 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 MISCELLANEOUS DETAILS

SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	35
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



**GENERAL NOTES**

1. THE NATIONAL ARBORIST ASSOCIATION'S PRUNING STANDARDS FOR SHADE TREES CLASS II - STANDARD PRUNING SPECIFICATIONS SHALL BE FOLLOWED.

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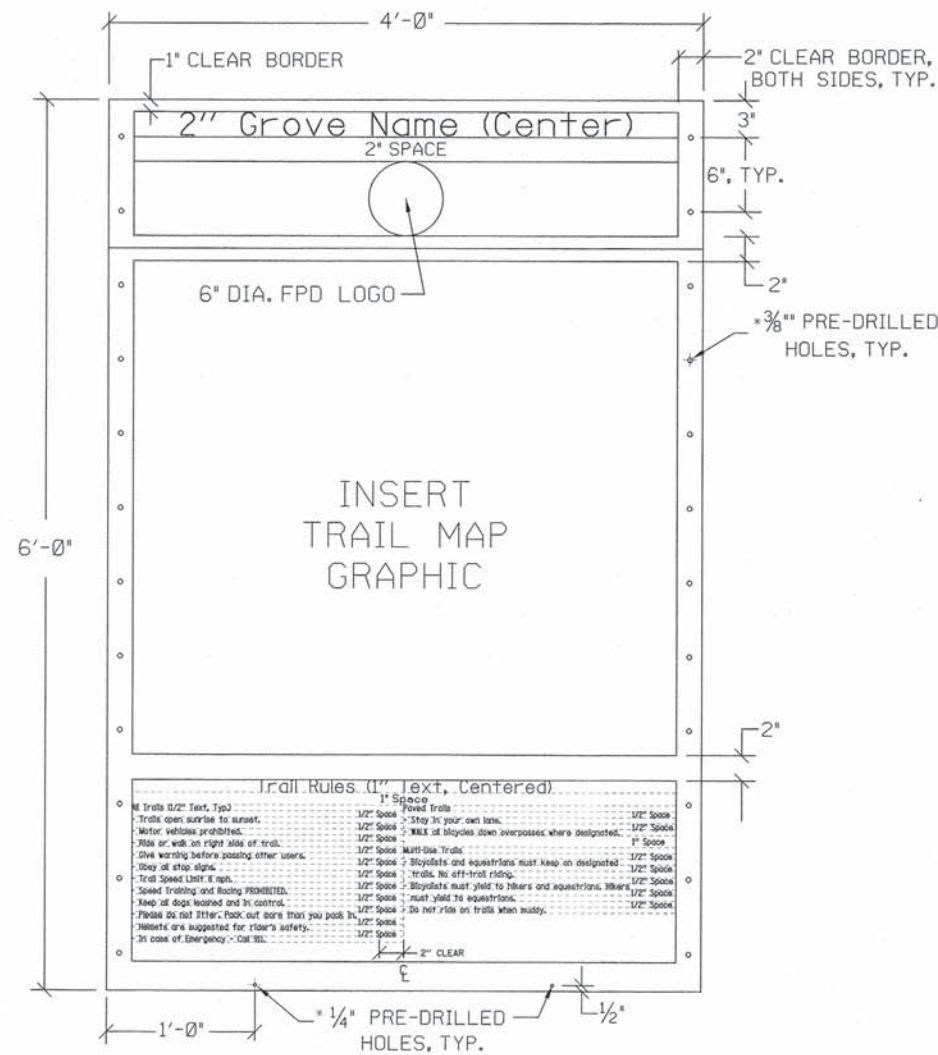
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DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION  
PRUNING FOR SAFETY AND EQUIPMENT CLEARANCE**

SCALE: NTS SHEET NO. 4 OF 4 SHEETS STA. — TO STA. —

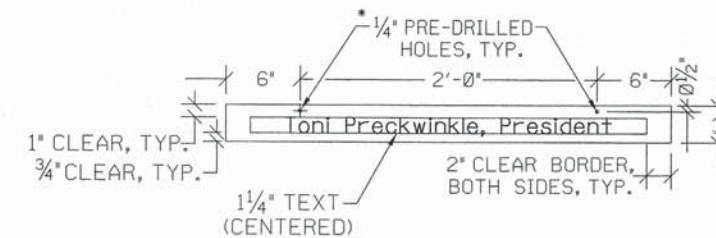
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	08-F3000-21-BT	COOK	129	36
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



**NOTES:**

- |   |  |   |
|---|--|---|
| 1. PANEL SHALL BE .125" ALUMINUM, ENGINEER GRADE, WITH DOUBLESIDED GRAPHIC WITH ANTI-GRAFFITI COATING, BOTH SIDES OF PANEL. | 4. RULES SECTION - BACKGROUND COLOR: CREAM TEXT COLOR: MAROON. LEFT JUSTIFY TEXT EXCEPT TITLE.           | 7. COLOR SAMPLES ON FINISHED MATERIALS TO BE PROVIDED FOR APPROVAL. |
| 2. HEADER SECTION - BACKGROUND COLOR: MAROON TEXT AND LOGO COLOR: CREAM   | 5. FONT: BOOKMAN OLD STYLE, BOLD.  | 8. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.                   |
| 3. MAP SECTION - BACKGROUND COLOR: CREAM  | 6. MAP GRAPHIC, GROVE NAMES AND RULES TEXT TO BE PROVIDED BY FOREST PRESERVE DISTRICT IN DIGITAL FORMAT. |   |

**TRAIL HEAD SIGN PANEL**  
N.T.S.



**PRESIDENT PANEL NOTES:**

- PANEL SHALL BE .080" ALUMINUM PANEL, ENGINEER GRADE WITH DOUBLE-SIDED GRAPHIC.
- BACKGROUND COLOR: CREAM  
TEXT COLOR: MAROON
- FONT: BOOKMAN OLD STYLE, BOLD, UPPER AND LOWER CASE LETTERS.
- COLOR SAMPLES ON FINISHED MATERIALS TO BE PROVIDED FOR APPROVAL.
- SHOP DRAWINGS SHALL BE PROVIDED FOR APPROVAL.

**TRAIL HEAD PRESIDENT SIGN PANEL**  
N.T.S.

**SIGN PANEL DETAIL**

FILE NAME: D:\Cook\FPD\_28367865\_Nor-Branch\Ext\Roadside\Phase 2 Engineering\General\Sign\_Panel\_Detail.dgn



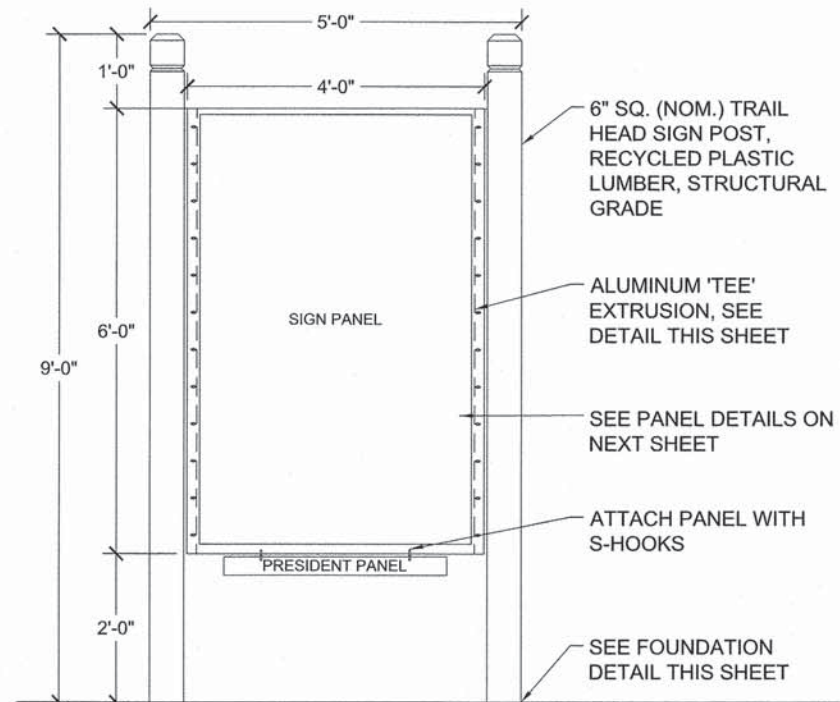
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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

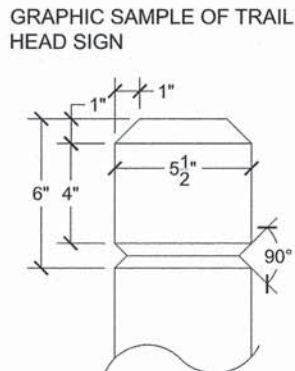
**NORTH BRANCH BIKE TRAIL EXTENSION**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	37
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

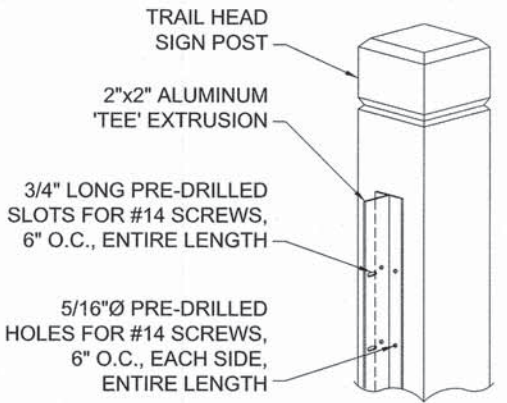


NOTES:  
1. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.

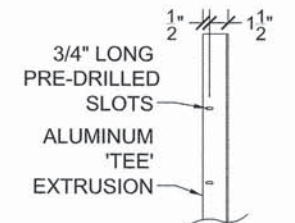
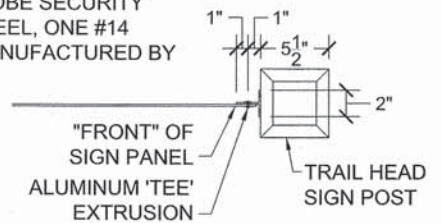


POST TOP DETAIL

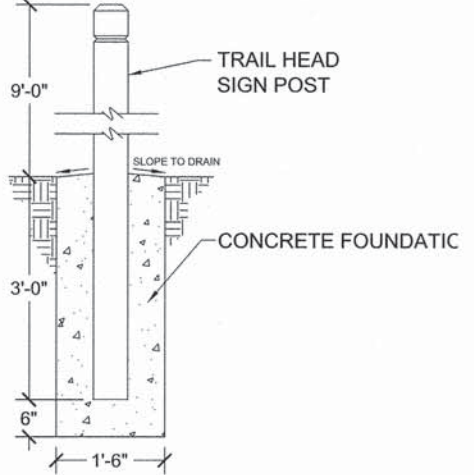
NOTES:  
1. FASTEN TEE TO POST WITH #14 x 1.5" SIX-LOBE SECURITY SCREWS, BUTTON HEAD, TYPE SMS, STAINLESS STEEL AND WASHER.  
2. FASTEN SIGN PANEL TO TEE WITH #14 x 1" SIX-LOBE SECURITY SCREWS, BUTTON HEAD, TYPE M/S, STAINLESS STEEL, ONE #14 WASHER AND ONE #14 TAMPER-PROOF NUT AS MANUFACTURED BY GUARD-NUT INC., SERIES 75, PLATED STEEL.



ALUMINUM EXTRUSION

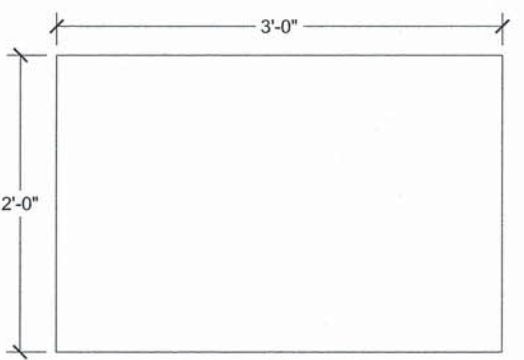


1 TRAIL HEAD SIGN  
NO SCALE



3 TRAIL HEAD POST FOUNDATION  
NO SCALE

2 TRAIL HEAD POST DETAILS  
NO SCALE



4 INTERPRETIVE SIGN PANEL  
NO SCALE

NOTES:  
1. PANEL SHALL BE .125" ALUMINUM, ENGINEER GRADE, WITH DOUBLE-SIDED GRAPHIC WITH ANTI-GRAFFITI COATING, BOTH SIDES OF PANEL.  
2. ALL GRAPHICS TO BE PROVIDED BY FOREST PRESERVE DISTRICT IN DIGITAL FORMAT.  
3. COLOR SAMPLES ON FINISHED MATERIALS TO BE PROVIDED FOR APPROVAL.  
4. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.

SIGN DETAILS

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PLOT DATE = 12/11/2014	CHECKED - -	REVISED -
	DATE - -	REVISED -

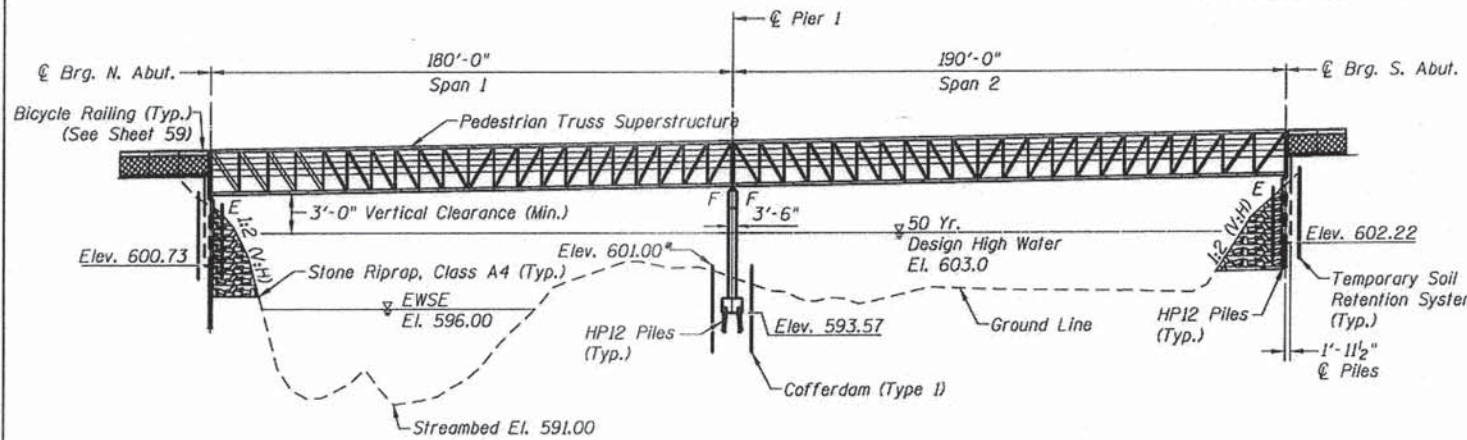
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION				
SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

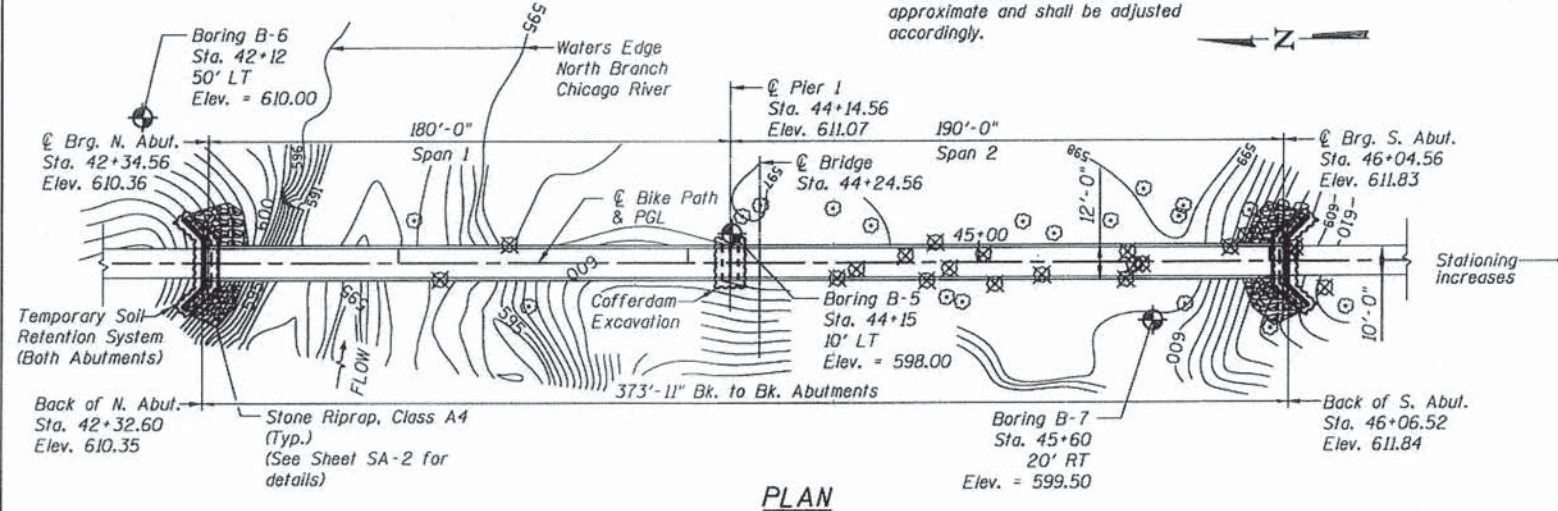
Benchmark: Control Point #7: Sta. 41+91.64 Offset 31.14 ft RT N=1,939,612.458 E=1,138,483.459 EL=612.540  
 Control Point #8: Sta. 47+47.02 Offset 191.26 ft RT N=1,939,020.846 E=1,138,330.835 EL=613.643  
 Existing Structure: None.

NOTE:  
 HORIZONTAL DATUM: NAD 83  
 VERTICAL DATUM: NAVD 88



ELEVATION  
 (Looking East)

\*Top of Cofferdam shall be set one foot above the existing ground elevation. Elevation shown is approximate and shall be adjusted accordingly.



PLAN

WATERWAY INFORMATION

Drainage Area = -		Low Grade Elev. - Sta. -					
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.	
Design	10	2,495	736	737	600.3	0.1	600.4
Base	50	3,580	956	958	603.0	0.1	603.1
Overtopping	100	4,065	1,078	1,079	604.8	0.1	604.9
Max. Calc.	500	5,330	1,186	1,187	606.8	0.1	607.0

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	Pier 1	S. Abut.
	600.00	593.28	598.50

DESIGN STRESSES

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.09g  
 Design Spectral Acceleration at 0.2 sec. ( $S_{D2}$ ) = 0.158g  
 Soil Site Class = D

DESIGN SPECIFICATIONS

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

Illinois Department of Transportation Standard Specifications For Road and Bridge Construction, Adopted January 1, 2012; and Supplemental Specifications and Recurring Special Provisions Adopted January 1, 2015.

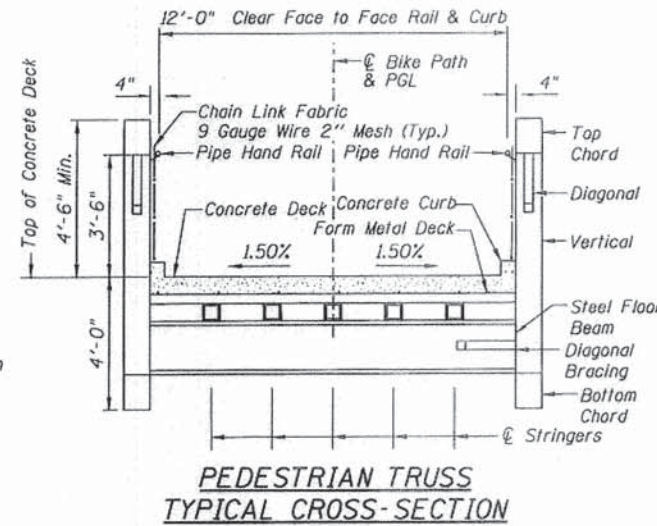
2009 AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges.

CLASSIFICATION

Pedestrian/Bicycle Bridge

LIVE LOADING

90 psf Live Load  
 (May be adjusted for influence area)  
 20,000 lb. Vehicle Load (H-10 Truck)



PEDESTRIAN TRUSS  
 TYPICAL CROSS-SECTION

INDEX OF DRAWINGS

- SA-1 General Plan & Elevation
- SA-2 Deck Elevations, T.B.O.M. and Miscellaneous Details
- SA-3 Deck Joint Details
- SA-4 North Abutment
- SA-5 South Abutment
- SA-6 Pier
- SA-7 HP Pile Details
- SA-8 Boring Logs
- SA-9 Boring Logs

LEGEND

- Tree Removal (See Bike Path Plans)
- Tree to Remain
- Soil Boring



*Theodore P. Georgas* 11-6-14  
 THEODORE P. GEORGAS DATE  
 LICENSED STRUCTURAL ENGINEER  
 STATE OF ILLINOIS 081-004609  
 EXPIRES 11/30/2016

I certify that to the best of my knowledge, information and belief, this 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 NOTES

All structural steel shall be AASHTO M 270 Grade 50W (except expansion joints which shall be AASHTO M 270 Grade 50).

All structural steel and exposed surfaces of bearings within a distance of 10 ft. each way from the deck joints shall be painted as specified in Section 506 of the Standard Specifications.

Reinforcement bars designated (E) shall be epoxy coated.

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (in painted areas and ASTM A325 Type 3 in unpainted areas).

No field welding is permitted except as specified in the contract documents.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to all exposed surfaces of abutments and piers.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The work included under Pedestrian Truss Superstructure shall consist of furnishing, fabricating, transporting, erecting, painting as specified, metal decking, concrete, bearings, anchor bolts, wire mesh fence and attachments, and any other item of work to complete the work.

Before fabrication, the Contractor shall submit structural calculations and shop drawings signed and stamped by an Illinois registered Structural Engineer to the Engineer for review and approval, as per Standard Specifications, Section 505.

A cantilevered sheet piling design 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.

	REACTION TABLE					
	P (k)		H (k)		L (k)	
Span	1	2	1	2	1	2
Dead Load	68.93	72.78				
Uniform Live Load	48.60	51.30				
Vehicle Load	10.00	10.00				
Wind Uplift (20 psf)	(-)18.90	(-)19.95				
Wind	+21.38	+22.79	37.80	39.90		
Thermal					10.34	10.92

Loads are provided by a fabricator and for reference only.  
 (-) Indicates uplift load  
 P = Vertical Load at Each Bearing  
 H = Horizontal Load at Each Footing  
 L = Longitudinal Load at Each Bearing

GENERAL PLAN & ELEVATION  
 NORTH BRANCH TRAIL OVER  
 THE NORTH BRANCH CHICAGO RIVER  
 SECTION 08-F3000-21-BT  
 COOK COUNTY  
 STATION 44+24.56  
 STRUCTURE NUMBER 016-P017

FILE NAME = #FILE#

Primera

USER NAME = #USER#	DESIGNED - MMZ	REVISED -
DESIGNED - MMZ	REVISED -	
DRAWN - MMZ	REVISED -	
CHECKED - JPM/JMH/TPG	REVISED -	
DATE - 10/20/2014	REVISED -	

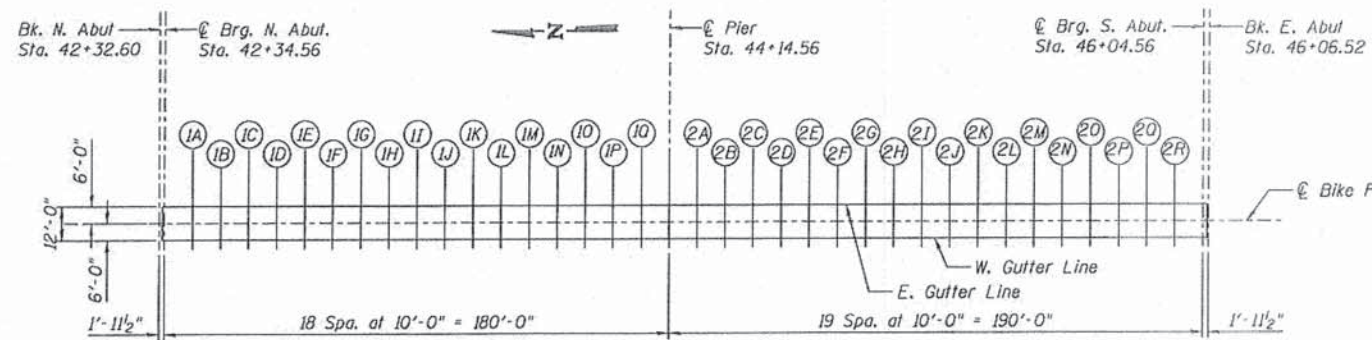
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-P017  
 SHEET NO. SA-1 OF SA-9 SHEETS

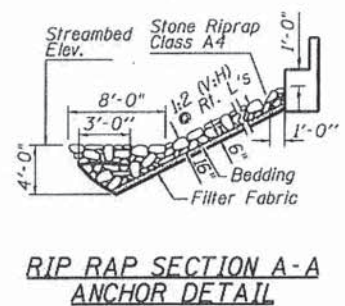
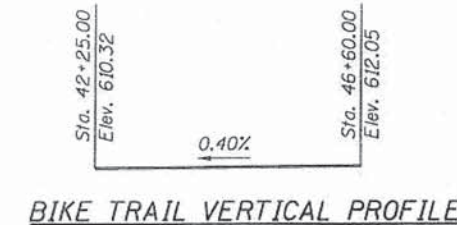
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	39
CONTRACT NO. 6/A 86				

**TOP OF DECK ELEVATIONS**  
(Final elevations, not adjusted for DL deflection)

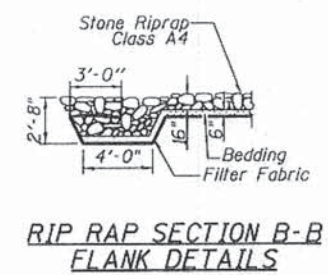
Location	Station	℄ Line	E.W. Gutter
Bk. N. Abut.	42+32.60	610.35	610.26
℄ Brg. N. Abut.	42+34.56	610.36	610.27
1A	42+44.56	610.40	610.31
1B	42+54.56	610.44	610.35
1C	42+64.56	610.48	610.39
1D	42+74.56	610.52	610.43
1E	42+84.56	610.56	610.47
1F	42+94.56	610.60	610.51
1G	43+04.56	610.64	610.55
1H	43+14.56	610.68	610.59
1I	43+24.56	610.72	610.63
1J	43+34.56	610.76	610.67
1K	43+44.56	610.80	610.71
1L	43+54.56	610.84	610.75
1M	43+64.56	610.88	610.79
1N	43+74.56	610.91	610.82
1O	43+84.56	610.95	610.86
1P	43+94.56	610.99	610.90
1Q	44+04.56	611.03	610.94
℄ Pier	44+14.56	611.07	610.98
2A	44+24.56	611.11	611.02
2B	44+34.56	611.15	611.06
2C	44+44.56	611.19	611.10
2D	44+54.56	611.23	611.14
2E	44+64.56	611.27	611.18
2F	44+74.56	611.31	611.22
2G	44+84.56	611.35	611.26
2H	44+94.56	611.39	611.30
2I	45+04.56	611.43	611.34
2J	45+14.56	611.47	611.38
2K	45+24.56	611.51	611.42
2L	45+34.56	611.55	611.46
2M	45+44.56	611.59	611.50
2N	45+54.56	611.63	611.54
2O	45+64.56	611.67	611.58
2P	45+74.56	611.71	611.62
2Q	45+84.56	611.75	611.66
2R	45+94.56	611.79	611.70
℄ Brg. S. Abut.	46+04.56	611.83	611.74
Bk. S. Abut.	46+06.52	611.84	611.75



**TOP OF DECK PLAN**



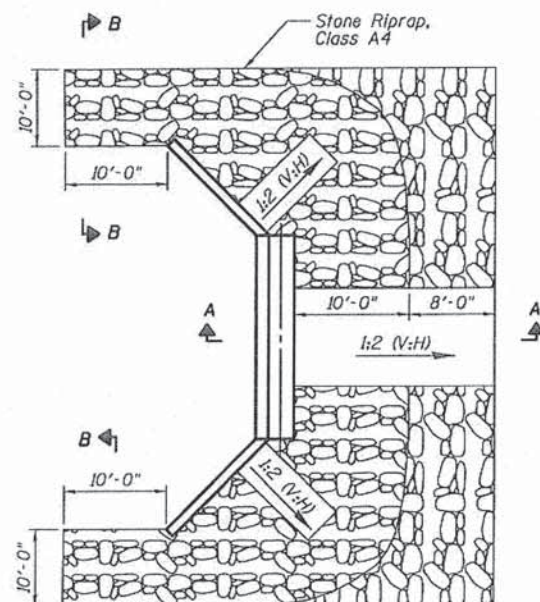
**RIP RAP SECTION A-A ANCHOR DETAIL**



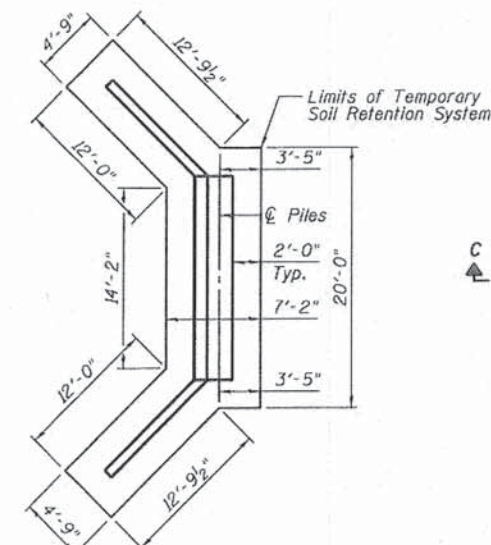
**RIP RAP SECTION B-B FLANK DETAILS**

**TOTAL BILL OF MATERIAL**

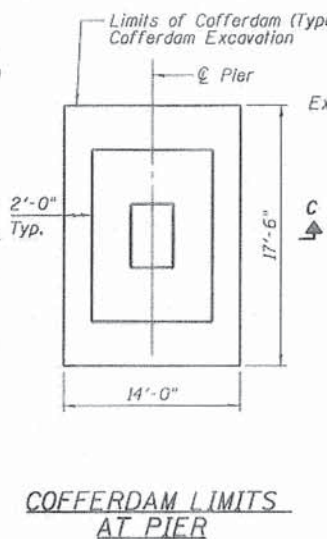
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	-	317	317
Filter Fabric	Sq. Yd.	-	317	317
Structure Excavation	Cu. Yd.	-	91	91
Concrete Structures	Cu. Yd.	-	64.3	64.3
Reinforcement Bars, Epoxy Coated	Pound	-	11,140	11,140
Furnishing Steel Piles HP12x53	Foot	-	376	376
Furnishing Steel Piles HP12x63	Foot	-	204	204
Driving Piles	Foot	-	580	580
Test Pile Steel HP12x53	Each	-	1	1
Test Pile Steel HP12x63	Each	-	2	2
Pile Shoes	Each	-	15	15
Preformed Joint Strip Seal	Foot	39	-	39
Concrete Sealer	Sq. Ft.	-	805	805
Pedestrian Truss Superstructure	Sq. Ft.	5,550	-	5,550
Temporary Soil Retention System	Sq. Ft.	-	809	809
Cofferdam Excavation	Cu. Yd.	-	59	59
Cofferdam (Type I)	Each	-	1	1



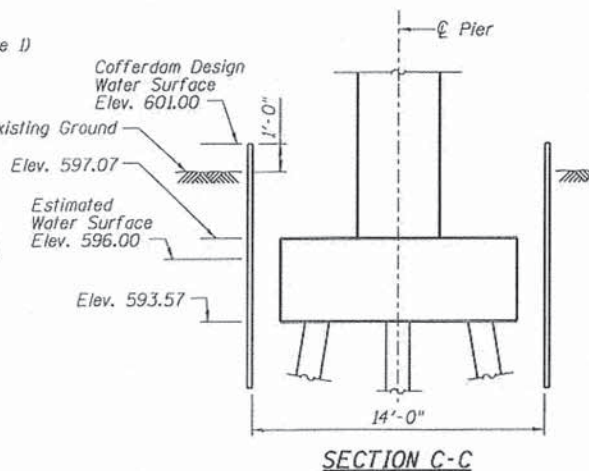
**TYPICAL SLOPE PROTECTION LAYOUT AT ABUTMENTS**



**TEMPORARY SOIL RETENTION LIMITS AT ABUTMENTS**



**COFFERDAM LIMITS AT PIER**

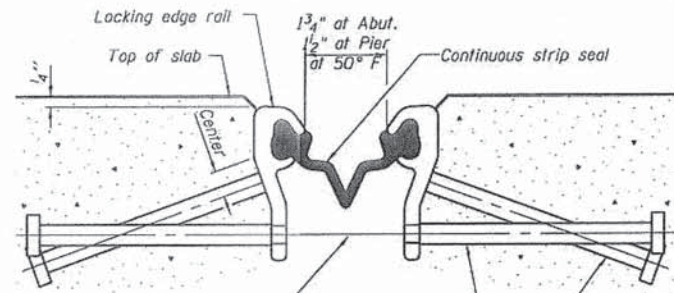


**SECTION C-C**

Note:  
It is the Contractor's responsibility to provide a design of the cofferdam, which is shown in this plan, and all the appurtenances required and must be submitted to the Engineer for review and approval.

FILE NAME = 8FILES

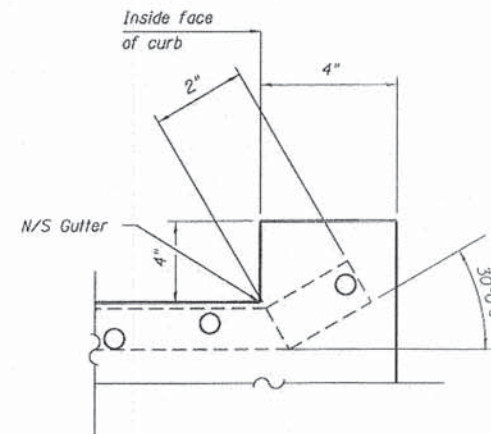




7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

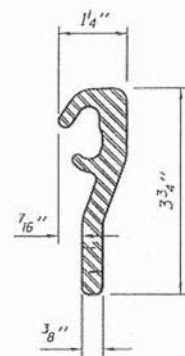
Place 1/2"  $\phi$  x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

**SECTION THRU EXPANSION STRIP SEAL JOINT**

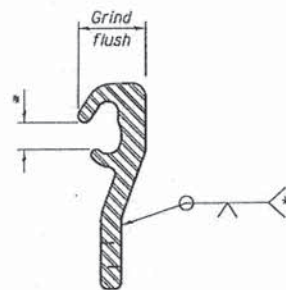


**EXPANSION JOINT AT CURB**

(Showing plate)  
(N.T.S.)



**LOCKING EDGE RAIL**



**LOCKING EDGE RAIL SPLICE**

\* Omit weld at seal opening.

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	39

**Note:**

Preformed Joint Strip Seal shall be installed on both abutment expansion joints.

FILE NAME: \*RFILE\*



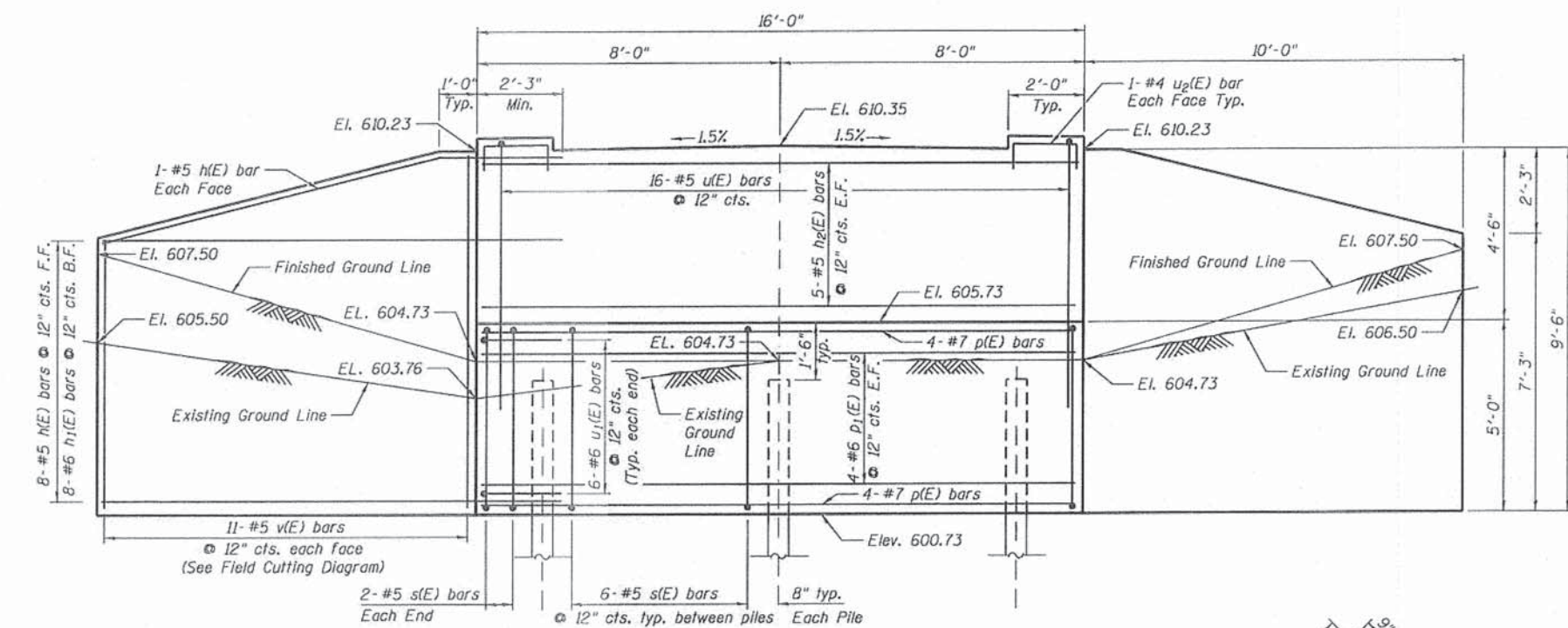
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PLOT DATE: *DATE*	CHECKED: - JPM/MMH/TPG	REVISED: -
	DATE: - 10/20/2014	REVISED: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

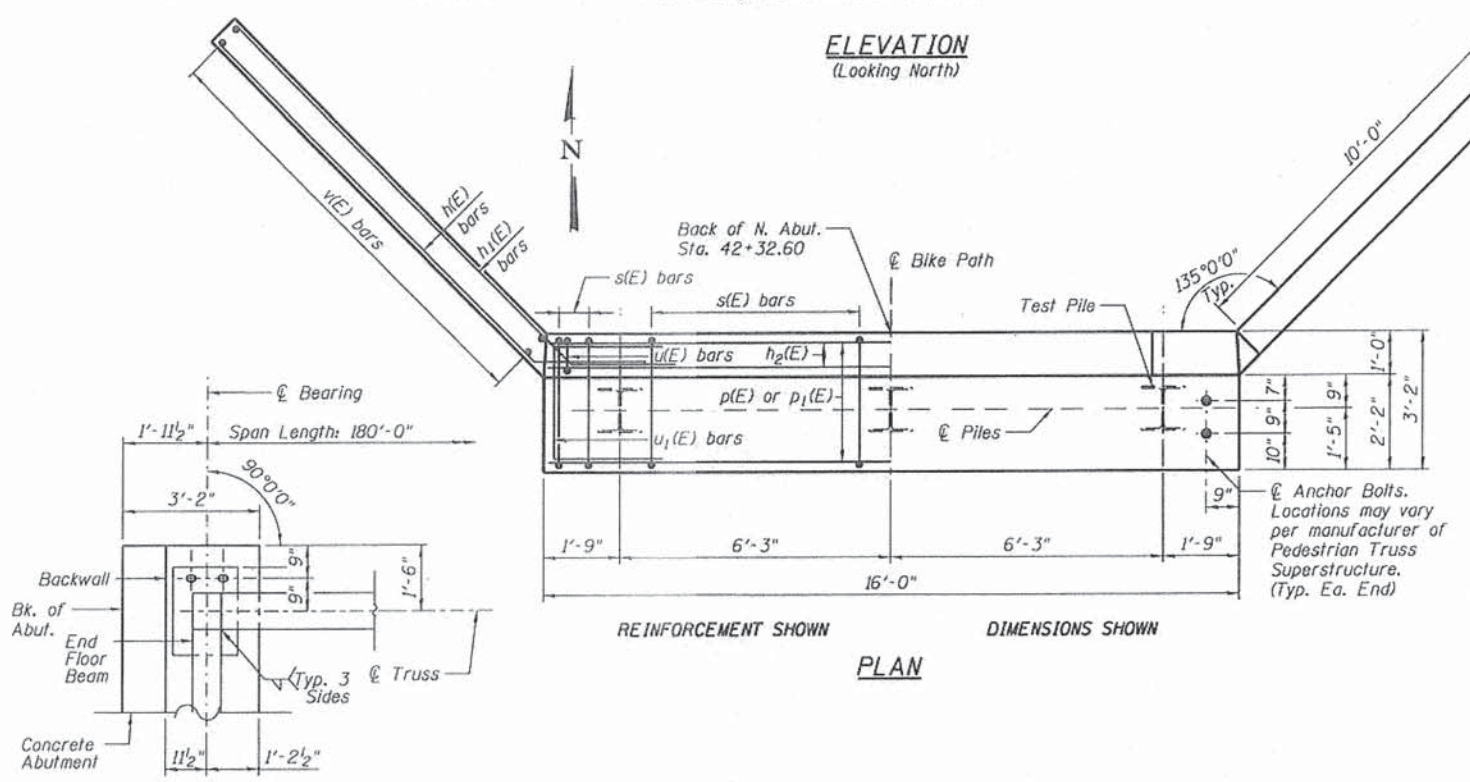
DECK JOINT DETAILS  
STRUCTURE NO. 016-P017

SHEET NO. SA-3 OF SA-9 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	41
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 61A36	



**ELEVATION**  
(Looking North)

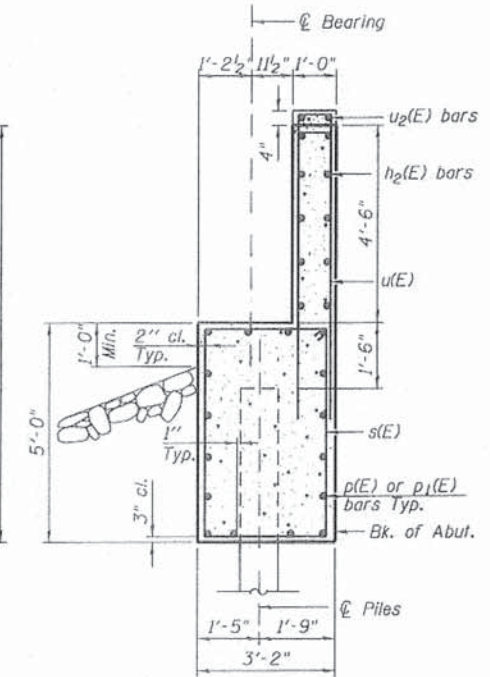


**REINFORCEMENT SHOWN**  
**PLAN**



**BEARING ASSEMBLY PLAN**  
Typ. Each Corner

\*Dimensions are based on Contech's information only and may vary depending on final manufacturer. (See Special Provisions)



**SEC. THRU ABUT.**

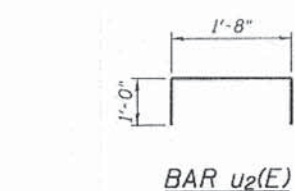
**MINIMUM BAR LAP**  
#5 = 2'-6"  
#6 = 3'-0"

**BILL OF MATERIAL**

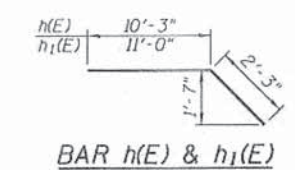
Bar	No.	Size	Length	Shape
h(E)	20	#5	12'-6"	
h1(E)	16	#6	13'-3"	
h2(E)	10	#5	15'-8"	
p(E)	8	#7	15'-8"	
p1(E)	8	#6	15'-8"	
s(E)	16	#5	15'-9"	
u(E)	17	#5	14'-4"	
u1(E)	12	#6	8'-9"	
u2(E)	4	#4	3'-8"	
v(E)	22	#5	15'-11"	
Structure Excavation			Cu. Yd.	42
Concrete Structures			Cu. Yd.	17.0
Reinforcement Bars, Epoxy Coated			Pound	2,240
Furnishing Steel Piles HP 12x63			Foot	102
Driving Piles			Foot	102
Test Pile Steel HP 12x63			Each	1
Pile Shoes			Each	3
Concrete Sealer			Sq. Ft.	234
Temporary Soil Retention System			Sq. Ft.	384

Note:  
F.F. = Front Face  
B.F. = Back Face  
E.F. = Each Face

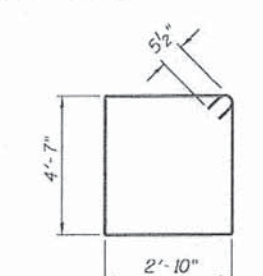
**PILE DATA**  
Type: Steel HP 12x63 with pile shoes  
Nominal Required Bearing: 392 kips  
Factored Resistance Available: 215 kips  
Est. Length: 51 ft  
No. Production Piles: 2  
No. Test Piles: 1



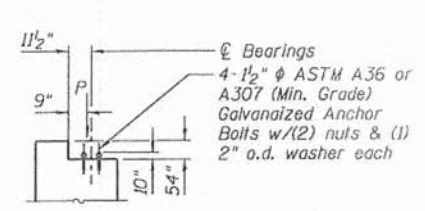
**BAR u2(E)**



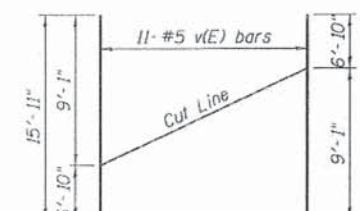
**BAR h(E) & h1(E)**



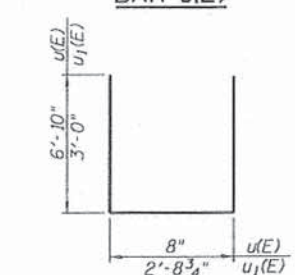
**BAR s(E)**



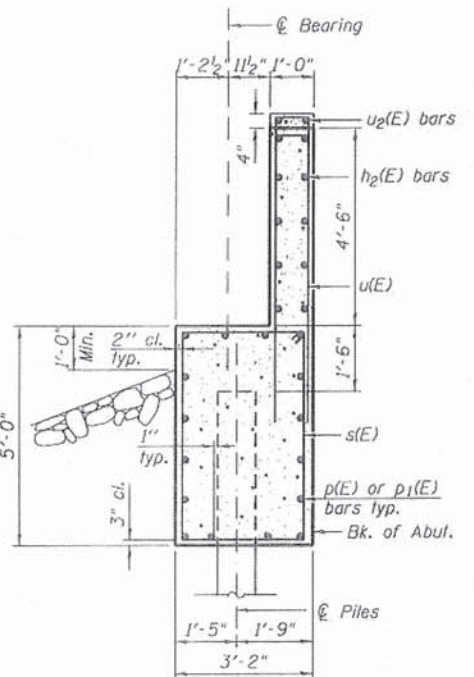
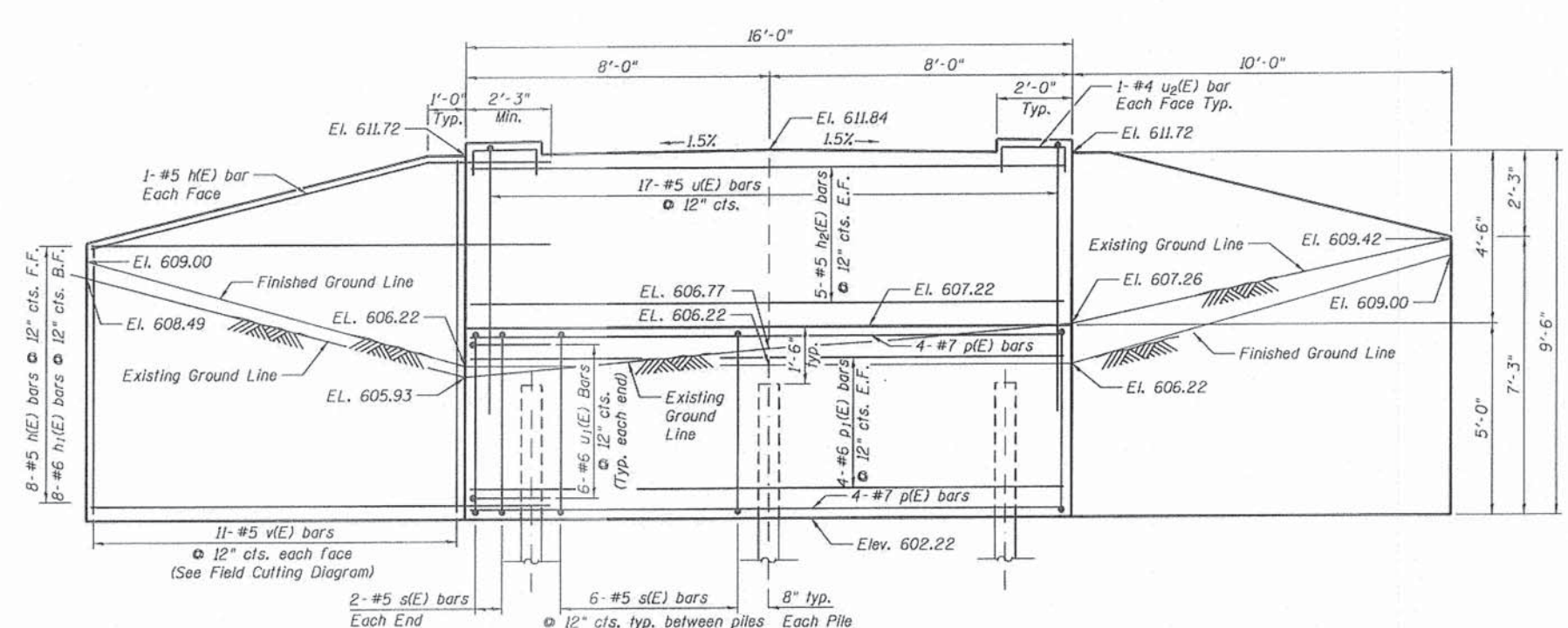
**ANCHOR BOLT ELEVATION**  
Cost of Anchor Bolts is included in "Pedestrian Truss Superstructure"



**FIELD CUTTING DIAGRAM**  
Order v(E) full length. Cut as shown and use remainder of bars in opposite face.



**BAR u(E), u1(E)**



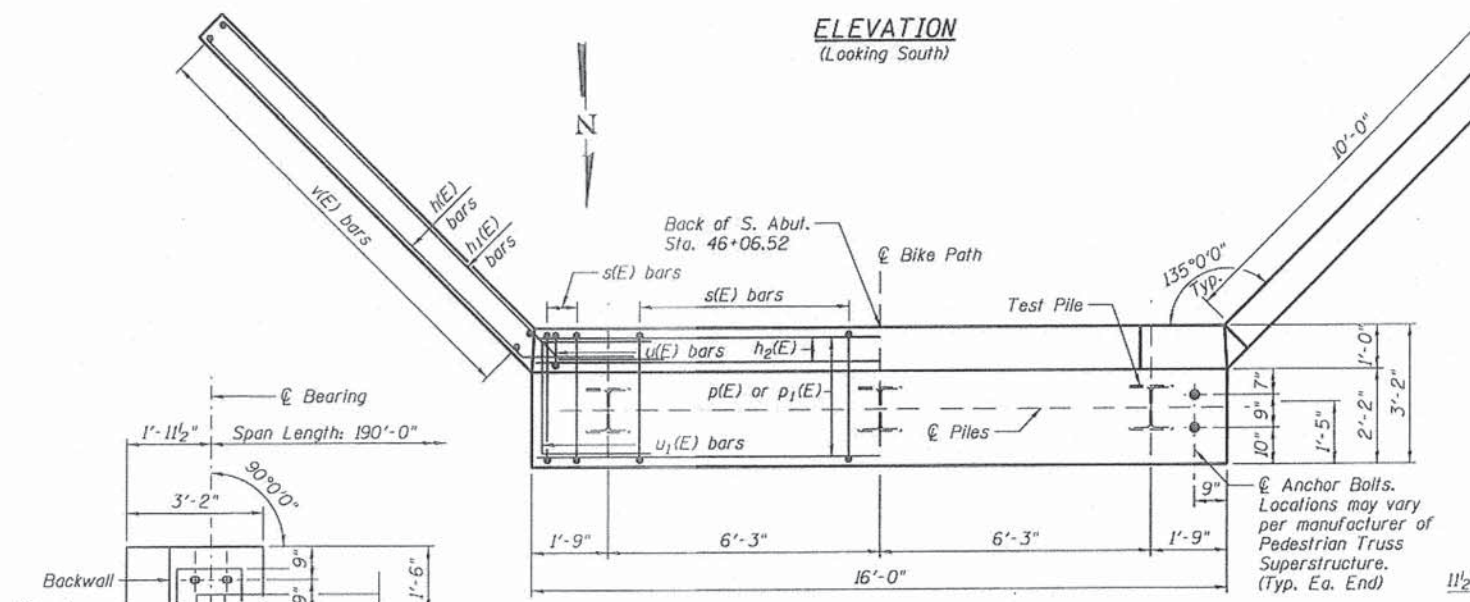
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	12'-6"	
h1(E)	16	#6	13'-3"	
h2(E)	10	#5	15'-8"	
p(E)	8	#7	15'-8"	
p1(E)	8	#6	15'-8"	
s(E)	16	#5	15'-9"	
u(E)	17	#5	14'-4"	
u1(E)	12	#6	8'-9"	
u2(E)	4	#4	3'-8"	
v(E)	22	#5	15'-11"	
Structure Excavation				Cu. Yd. 49
Concrete Structures				Cu. Yd. 17.0
Reinforcement Bars, Epoxy Coated				Pound 2,240
Furnishing Steel Piles HP 12x63				Foot 102
Driving Piles				Foot 102
Test Pile Steel HP 12x63				Each 1
Pile Shoes				Each 3
Concrete Sealer				Sq. Ft. 234
Temporary Soil Retention System				Sq. Ft. 425

Note:  
 F.F. = Front Face  
 B.F. = Back Face  
 E.F. = Each Face

**ELEVATION**  
(Looking South)

**SEC. THRU ABUT.**



**REINFORCEMENT SHOWN**  
**DIMENSIONS SHOWN**  
**PLAN**

**MINIMUM BAR LAP**

#5 = 2'-6"  
 #6 = 3'-0"

**PILE DATA**

Type: Steel HP 12x63 with pile shoes  
 Nominal Required Bearing: 392 kips  
 Factored Resistance Available: 215 kips  
 Est. Length: 51 ft  
 No. Production Piles: 2  
 No. Test Piles: 1

**BAR u2(E)**

**BAR h(E) & h1(E)**

**BAR s(E)**

**BAR u(E), u1(E)**

**ANCHOR BOLT ELEVATION\***

Cost of Anchor Bolts is included in "Pedestrian Truss Superstructure"

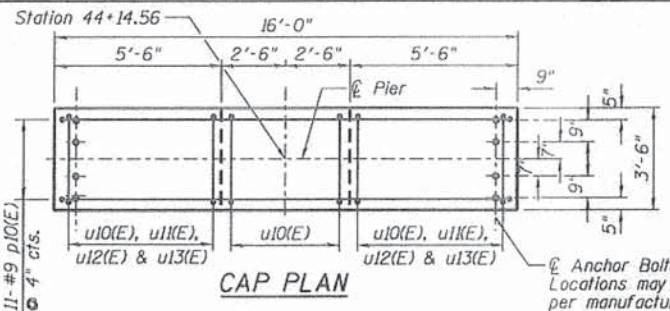
**FIELD CUTTING DIAGRAM**

Order v(E) full length. Cut as shown and use remainder of bars in opposite face.

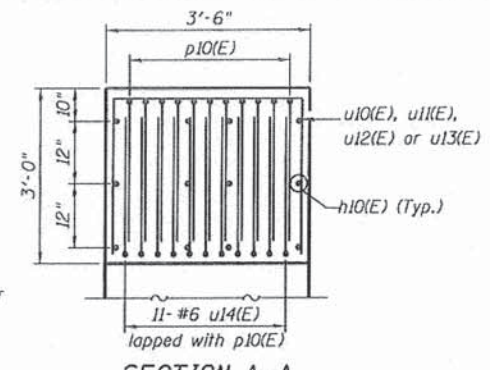
**BEARING ASSEMBLY PLAN\***  
Typ. Each Corner

\*Dimensions are based on Contech's information only and may vary depending on final manufacturer. (See Special Provisions)

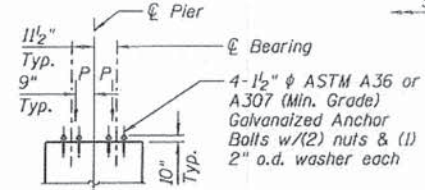
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	DATE - 10/20/2014	DATE -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



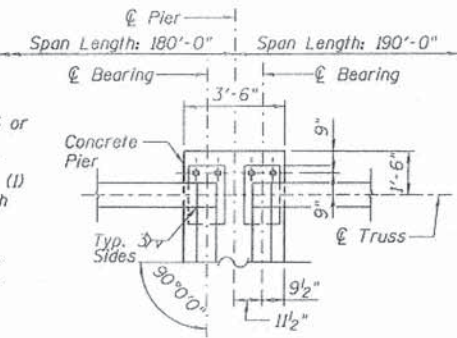
**CAP PLAN**



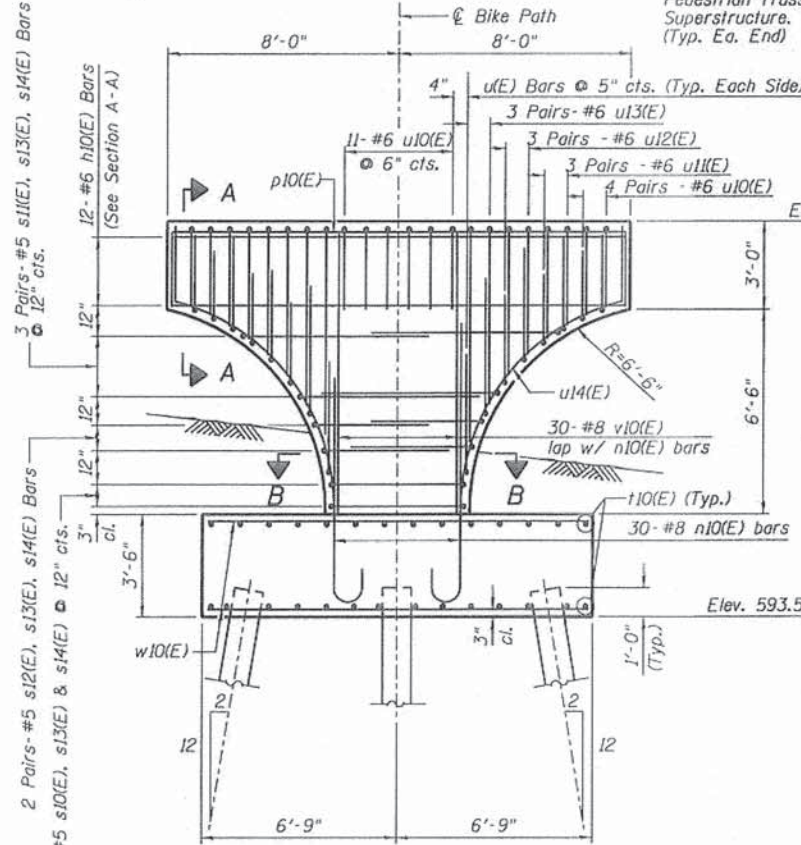
**SECTION A-A**



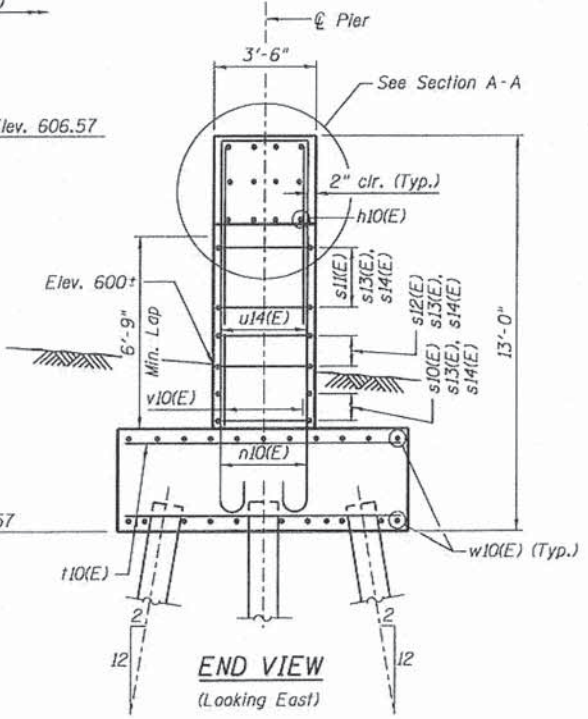
**ANCHOR BOLT ELEVATION**



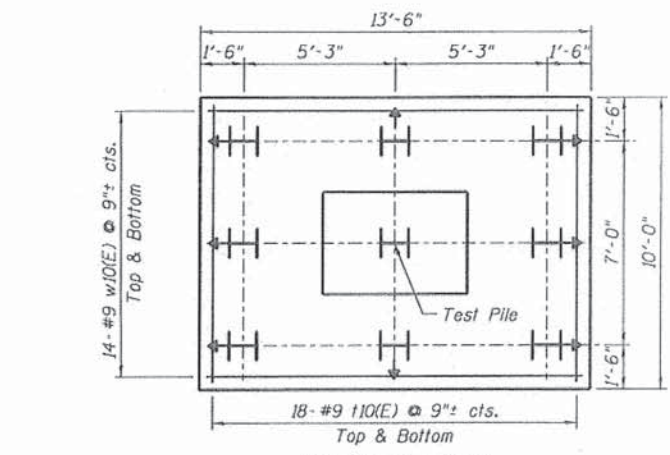
**BEARING ASSEMBLY PLAN**



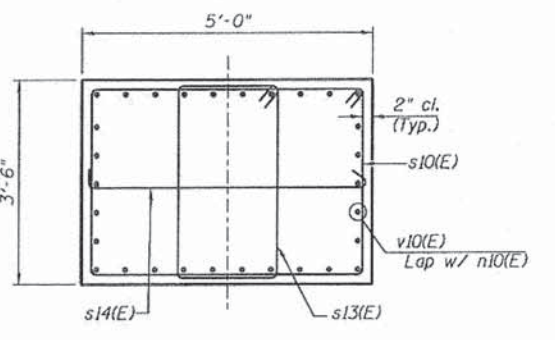
**ELEVATION (Looking North)**



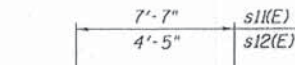
**END VIEW (Looking East)**



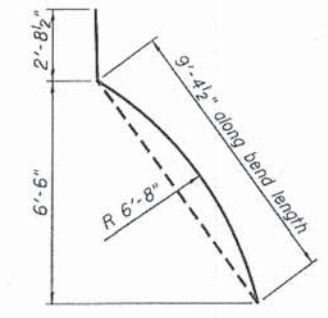
**FOOTING PLAN**



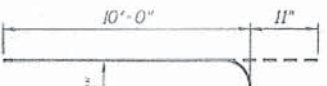
**SECTION B-B**



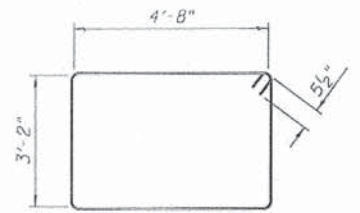
**BARS s11(E) & s12(E)**



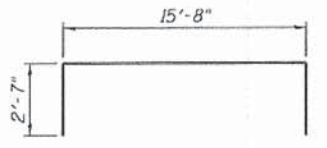
**BAR u14(E)**



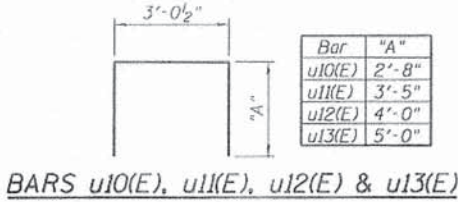
**BAR n10(E)**



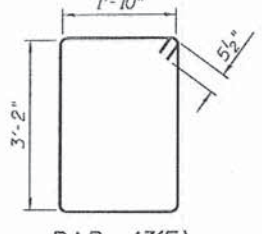
**BAR s10(E)**



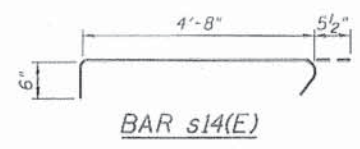
**BAR p10(E)**



**BARS u10(E), u11(E), u12(E) & u13(E)**



**BAR s13(E)**



**BAR s14(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h10(E)	12	#6	15'-8"	—
n10(E)	30	#8	10'-11"	U
p10(E)	11	#9	20'-10"	—
s10(E)	2	#5	16'-7"	—
s11(E)	6	#5	18'-4"	—
s12(E)	4	#5	12'-0"	—
s13(E)	7	#5	10'-11"	—
s14(E)	7	#5	5'-8"	—
v10(E)	36	#9	9'-8"	—
w10(E)	28	#9	13'-2"	—
Concrete Structures		Cu. Yd.	30.2	
Reinforcement Bars, Epoxy Coated		Pound	6,660	
Furnishing Steel Piles HP12x53		Foot	376	
Driving Piles		Foot	376	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	9	
Concrete Sealer		Sq. Ft.	337	
Cofferdam Excavation		Cu. Yd.	59	
Cofferdam (Type 1)		Each	1	

**NOTES:**

1. Concrete clear cover shall be 2" minimum unless noted otherwise.
2. All edges have standard 3/4" chamfers except as noted.
3. Space Reinforcement in Cap to miss Anchor Bolts.
4. Min. Lap for Bar #5 = 2'-6", #6 = 3'-0", #8 = 6'-9"

**PILE DATA**

Type: Steel HP12x53 with pile shoes  
 Nominal Required Bearing: 388 kips  
 Factored Resistance Available: 214 kips  
 Est. Length: 47 ft  
 No. Production Piles: 8 per pier  
 No. Test Piles: 1 per pier

**LEGEND**

E.F. = Each Face  
 Battered Pile

FILE NAME: 01FILES

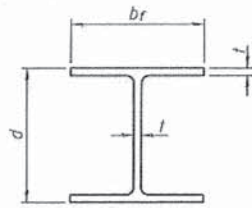


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	DATE: 10/20/2014	REVISD: -

STATE OF ILLINOIS  
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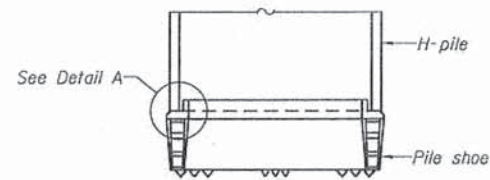
PIER  
 STRUCTURE NO. 016-P017  
 SHEET NO. SA-6 OF SA-9 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	44
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

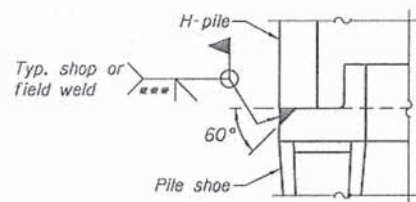


STEEL PILE TABLE

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

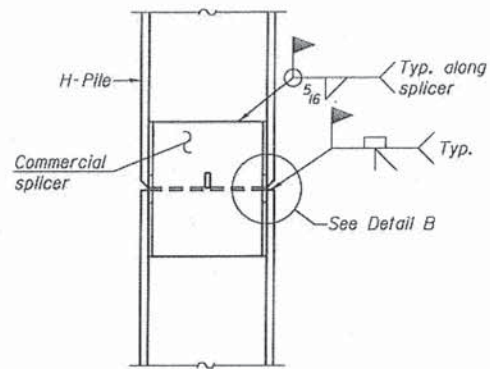


ELEVATION

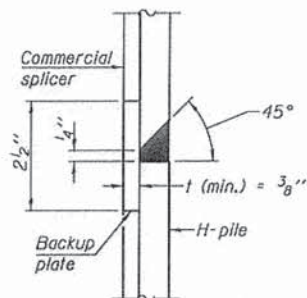


DETAIL A

H-PILE SHOE ATTACHMENT

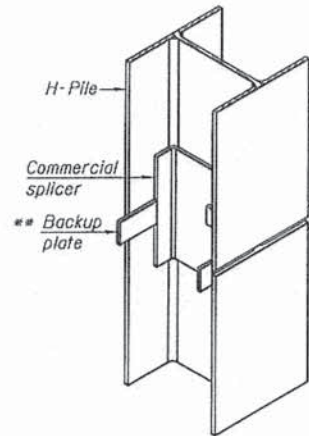


ELEVATION

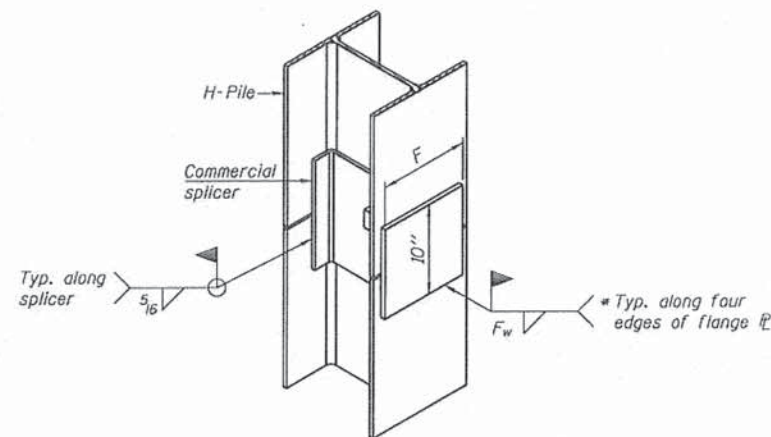


DETAIL "B"

WELDED COMMERCIAL SPLICE



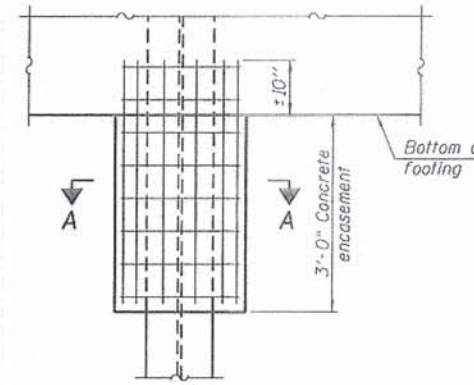
ISOMETRIC VIEW



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

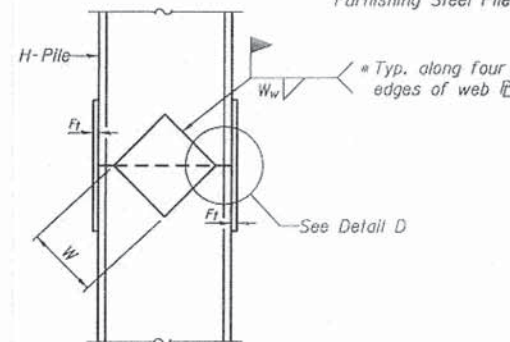
- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).



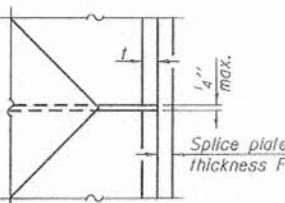
ELEVATION

PILE ENCASEMENT

Note: Concrete, reinforcement bars and welded wire fabric are incidental to Furnishing Steel Piles.

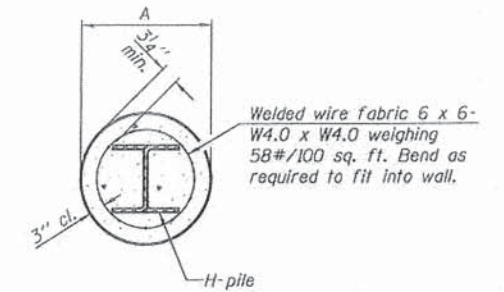


ELEVATION



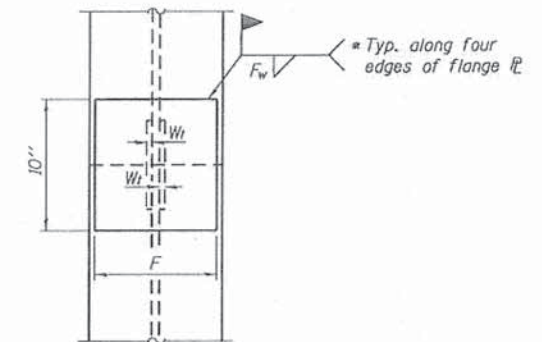
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

Note: Forms for encasement may be omitted when soil conditions permit.



END VIEW

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note: The steel H-piles shall be according to AASHTO M270 Grade 50.

FILE NAME: F-HP

F-HP

1-27-12

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	PLOT SCALE: #SCALE#	DRAWN: MMZ	REVISED:
	PLOT DATE: #DATE#	CHECKED: JPM/MMH/TPG	REVISED:
		DATE: 10/20/2014	REVISED:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS  
STRUCTURE NO. 016-P017

SHEET NO. SA-7 OF SA-9 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	45
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 6A86	

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 Customizing boring & testing logs  
 since 1988

**BORING NUMBER B-5**  
 PAGE 1 OF 2

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois  
 DATE STARTED: 12/16/12 COMPLETED: 12/19/12 GROUND ELEVATION: 603.0 ft URS Borehole Size: 9 inch  
 DRILLING CONTRACTOR: K & S Drilling GROUND WATER LEVELS:  
 DRILLING METHOD: Hollow Stem Augers AT TIME OF DRILLING: 4.0 ft / 6.5 ft 50%  
 LOGGED BY: DM CHECKED BY: AR AT END OF DRILLING: 3.0 ft / 5.5 ft 50%

NOTES: Near Pier #1 of proposed North Branch Chicago River Bridge. AFTER DRILLING: ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RCD)	BLOW COUNTS (N-VALUE)	POCKET PEN. (psi)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS	FINES CONTENT (%)
0		TOPSOIL - dark gray and dark brown; soft to medium stiff	SS 1		4-5-4 (9)	3.0			49	
1		SILTY SANDY CLAY; brown; wet; soft (CL-S)			2-1-1 (2)				11	
2		SILTY SAND; brownish gray; wet; loose (GM)	SS 2		1-2-4 (3)				25	
3		LEAN CLAY with trace of sand and gravel; brown to gray; moist to wet; soft to medium stiff - (CL)	SS 3		2-4-7 (11)	1.25			27	
4			SS 4		3-4-0 (12)	2.75			17	
5			SS 5		4-7-11 (18)	4.0			15	
6			SS 6		4-7-0 (18)	3.75			13	
7			SS 7		4-5-8 (13)	4.0			20	
8			SS 8		4-9-4 (16)	3.25			16	
9			SS 9		4-5-8 (13)	2.5			13	
10			SS 10		5-8-0 (3)	3.0			21	

(Continued Next Page)

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 since 1988

**BORING NUMBER B-5**  
 PAGE 2 OF 2

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RCD)	BLOW COUNTS (N-VALUE)	POCKET PEN. (psi)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS	FINES CONTENT (%)
31		CLAY with sand and gravel; brown; moist; medium stiff - (CL-S) (continued)	SS 11		117					
32		LEAN CLAY with traces of sand & gravel; grayish brown; moist; very stiff - (CL with sand)	SS 12		27-27-35 (62)	4.5		16		
33			SS 13		28-32-39 (71)	4.5		11		
34			SS 14		32-35-40 (75)	3.5		11		
35		CLAYEY SAND - brown; very moist; very stiff to hard - (SC)								
36		Possible SANDSTONE - Refusal at 55.75' Bottom of hole at 55.5 feet	SS 15		40-502*					

(Continued Next Page)

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 since 1988

**BORING NUMBER B-6**  
 PAGE 1 OF 2

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois  
 DATE STARTED: 12/20/12 COMPLETED: 12/20/12 GROUND ELEVATION: 610.2 ft URS Borehole Size: 9 inch  
 DRILLING CONTRACTOR: K & S Drilling GROUND WATER LEVELS:  
 DRILLING METHOD: Hollow Stem Augers AT TIME OF DRILLING: ---  
 LOGGED BY: DM CHECKED BY: AR AT END OF DRILLING: ---

NOTES: Near Pier #1 of proposed bridge over North Branch Chicago River AFTER DRILLING: ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RCD)	BLOW COUNTS (N-VALUE)	POCKET PEN. (psi)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS	FINES CONTENT (%)
0		0' TOPSOIL								
1		SILTY CLAY; brown and gray; moist; stiff - (CL-ML)	SS 1		6-9-11 (29)	4.5		31		
2			SS 2		3-11-12 (23)	4.5		14		
3			SS 3		3-12-17 (29)	4.5		14		
4			SS 4		8-11-17 (29)	4.5		28	37	20
5			SS 5		4-9-12 (21)	4.5		17		
6			SS 6		8-9-13 (22)	4.5		18		
7			SS 7		9-10-12 (22)	4.5		17		
8			SS 8		10-11-11 (22)			16		
9			SS 9		5-8-12 (20)	3.5		16		
10			SS 10		8-10-13 (23)	4.0		18		
11			SS 11		4-10-14	3.25		15		

(Continued Next Page)

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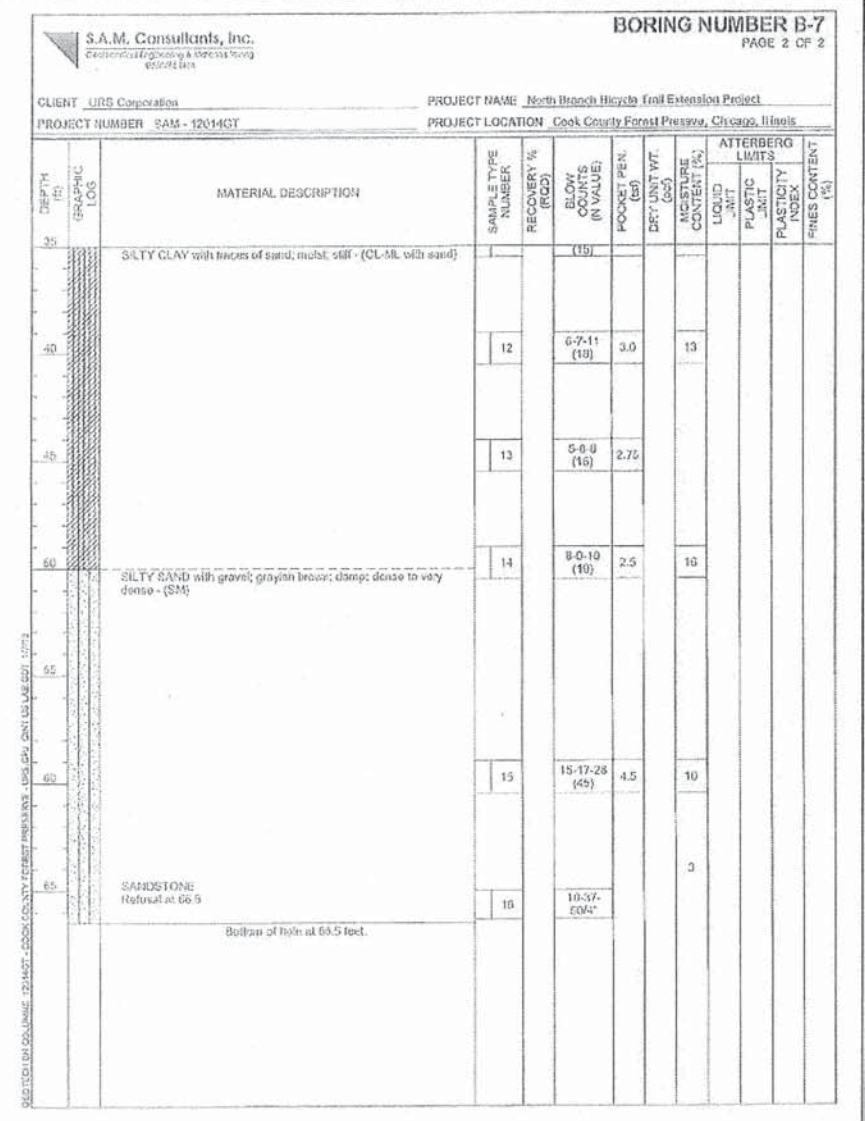
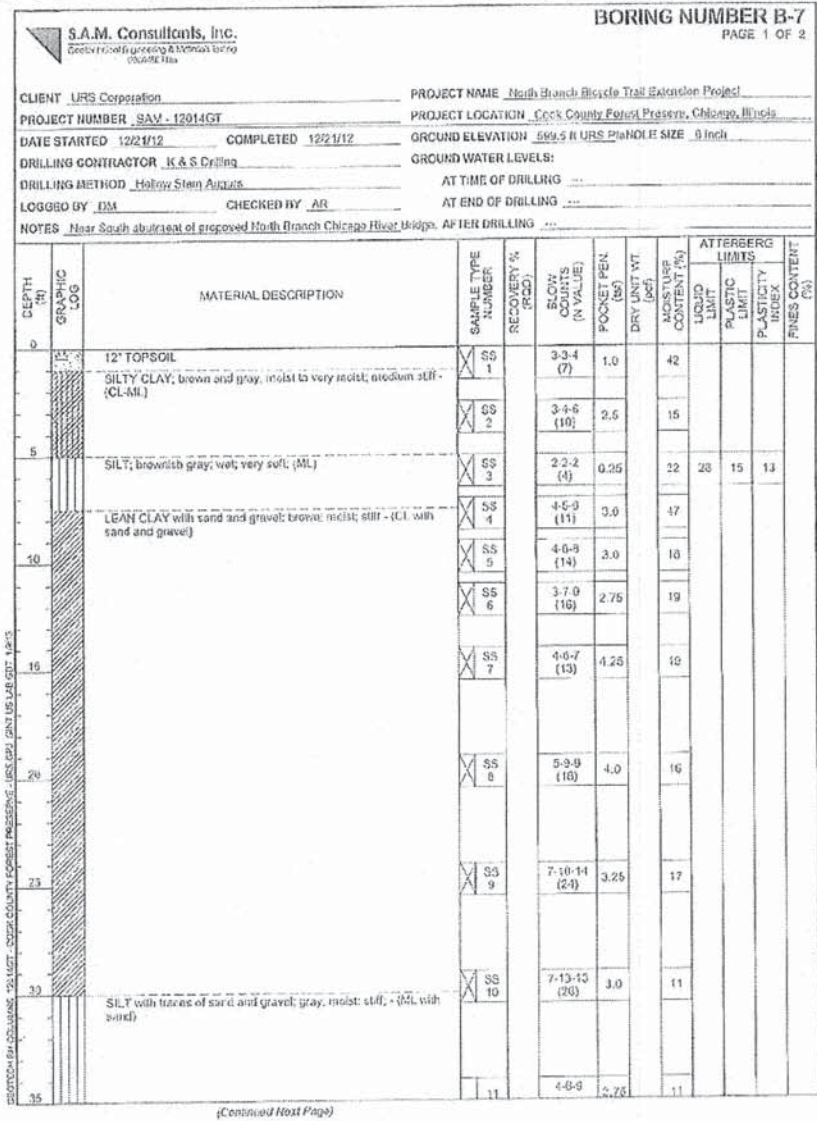
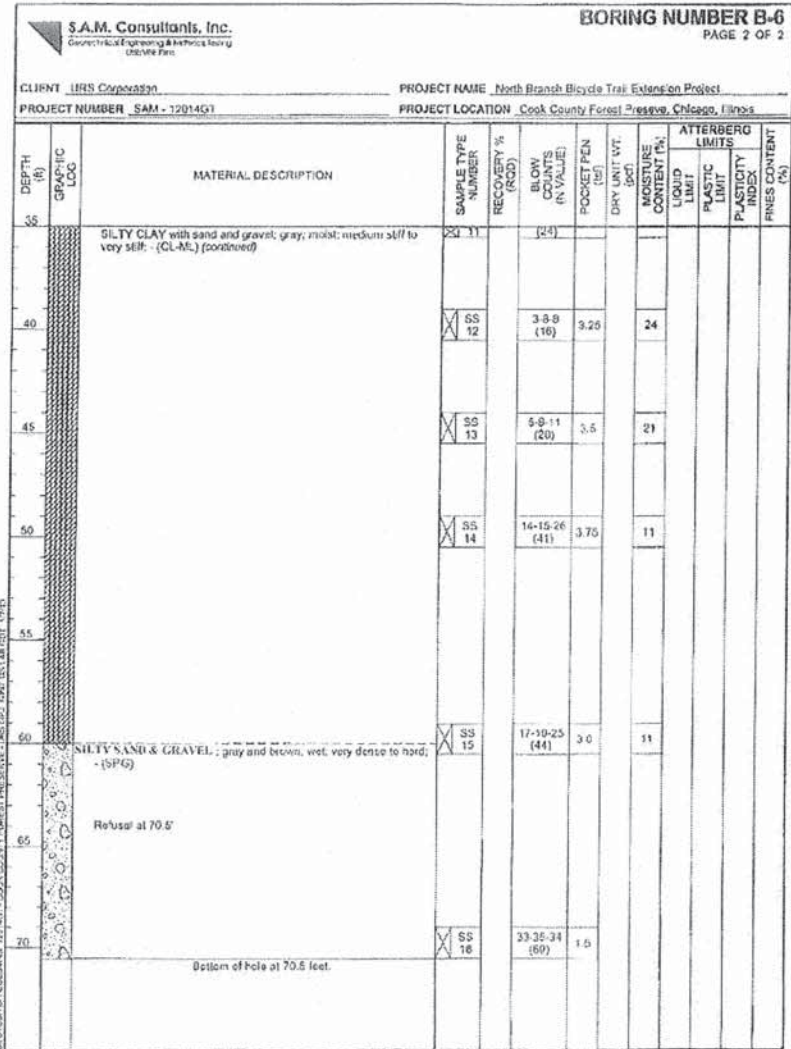


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	DATE: 10/20/2014	REVISED: -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS 1  
 STRUCTURE NO. 016-P017  
 SHEET NO. SA-6 OF SA-9 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	46
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 61886	



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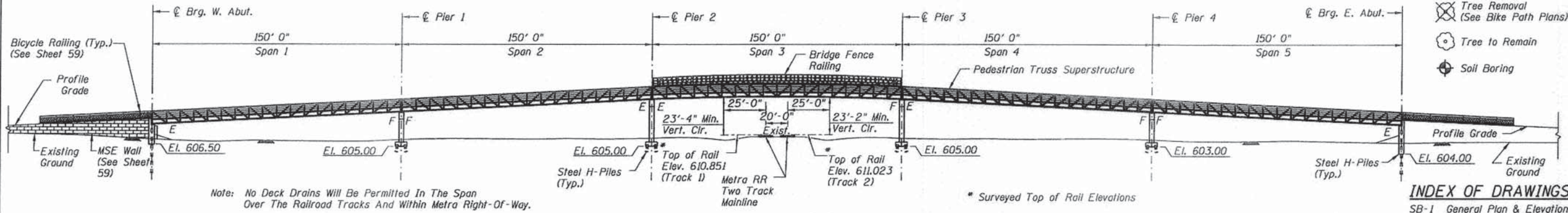
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BORING LOGS 2**  
**STRUCTURE NO. 016-P017**  
SHEET NO. SA-9 OF SA-9 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	47
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 61A86	

Benchmark: Control Point #11: STA. 60+13.06 Offset 20.79 ft LT N=1,938,383.445 E=1,139,423.252 EL=611.543  
Existing Structure: None

- LEGEND**
- Tree Removal (See Bike Path Plans)
  - Tree to Remain
  - Soil Boring



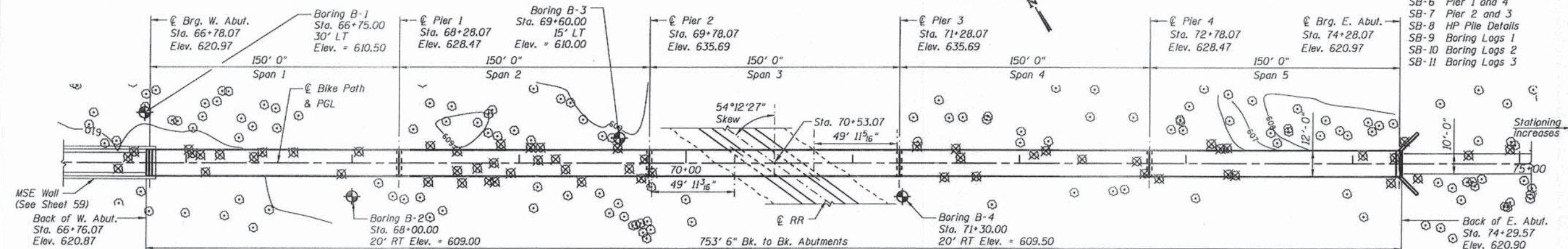
Note: No Deck Drains Will Be Permitted In The Span Over The Railroad Tracks And Within Metra Right-Of-Way. \* Surveyed Top of Rail Elevations

**INDEX OF DRAWINGS**

- SB-1 General Plan & Elevation Deck Elevations, T.B.O.M.
- SB-2 and Miscellaneous Details
- SB-3 Deck Joint Details
- SB-4 West Abutment
- SB-5 East Abutment
- SB-6 Pier 1 and 4
- SB-7 Pier 2 and 3
- SB-8 HP Pile Details
- SB-9 Boring Logs 1
- SB-10 Boring Logs 2
- SB-11 Boring Logs 3

**NOTE:**  
HORIZONTAL DATUM: NAD 83  
VERTICAL DATUM: NAVD 88

**ELEVATION**  
(Looking North)



**GENERAL NOTES**

All structural steel shall be AASHTO M 270 Grade 50W (except expansion joints which shall be AASHTO M 270 Grade 50).  
All structural steel and exposed surfaces of bearings within a distance of 10 ft. each way from the deck joints shall be painted as specified in Section 506 of the Standard Specifications.  
Reinforcement bars designated (E) shall be epoxy coated.  
Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (painted areas and ASTM A325 Type 3 in unpainted areas).  
No field welding is permitted except as specified in the contract documents.  
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.  
Concrete Sealer shall be applied to all exposed surfaces of abutments and piers.  
The work included under Pedestrian Truss Superstructure shall consist of furnishing, fabricating, transporting, erecting, painting as specified, metal decking, concrete, bearings, anchor bolts, bridge fence railing, wire mesh fence and attachments, and any other item of work to complete the work.  
Before fabrication, the Contractor shall submit structural calculations and shop drawings signed and stamped by an Illinois registered Structural Engineer to the Engineer for review and approval, as per Standard Specifications, Section 505.

**DESIGN SPECIFICATIONS LIVE LOADING**

2012 AASHTO LRFD Bridge Design Specifications, (6th Edition with 2012 Interims).  
Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Adopted January 1, 2012; and Supplemental Specifications and Recurring Special Provisions Adopted January 1, 2015.  
2009 AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges.  
90 psf Live Load (May be adjusted for influence area)  
20,000 lb. Vehicle Load (H-10 Truck)  
Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. ( $S_w$ ) = 0.09g  
Design Spectral Acceleration at 0.2 sec. ( $S_w$ ) = 0.158g  
Soil Site Class = D

**PLAN**

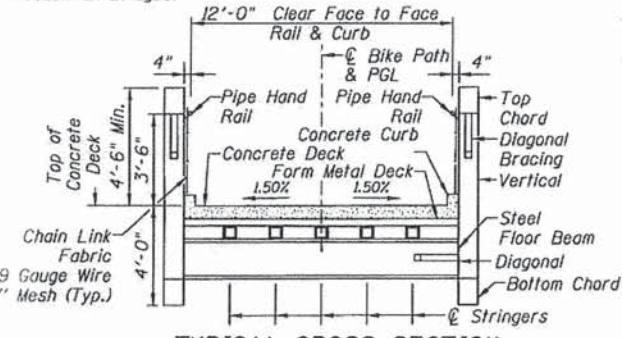
CLASSIFICATION  
Pedestrian/Bicycle Bridge  
DESIGN STRESSES  
 $f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)

Span	REACTION TABLE					
	P (k)		H (k)		L (k)	
Span	3	1,2,4,5	3	1,2,4,5	3	1,2,4,5
Dead Load	52.95	51.20				
Uniform Live Load	40.50	40.50				
Vehicle Load	10.00	10.00				
Wind Uplift (20 psf)	(-)15.38	(-)15.38				
Wind	+15.33	+13.46	29.32	27.35		
Thermal					7.95	7.68

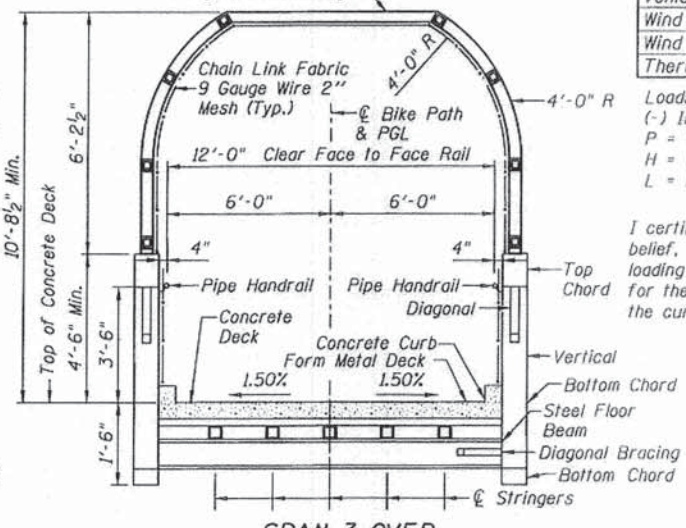
Loads are provided by a fabricator and for reference only.  
(-) Indicates uplift load  
P = Vertical Load at Each Bearing  
H = Horizontal Load at Each Footing  
L = Longitudinal Load at Each Bearing



I certify that to the best of my knowledge, information and belief, this 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.



**TYPICAL CROSS-SECTION SPANS 1, 2, 4 & 5**



**SPAN 3 OVER RR TRACKS - SECTION**



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION NORTH BRANCH BIKE TRAIL BRIDGE OVER METRA RAILROAD SECTION 08-F3000-21-BT COOK COUNTY STATION 70+53.07 STRUCTURE NUMBER 016-P021**



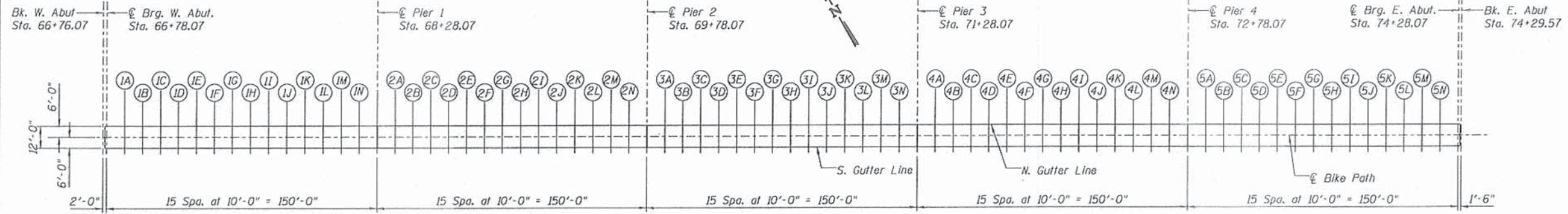
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	DATE - 10/20/2014	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-P021  
SHEET NO. SB-1 OF SB-11 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	48
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 61A26		





TOP OF DECK PLAN

TOP OF DECK ELEVATIONS

(Final elevations, not adjusted for DL deflection)

Location	Station	℄ Line	N./S. Gutter
Bk. W. Abut.	66+76.07	620.87	620.78
℄ Brg. W. Abut.	66+78.07	620.97	620.88
1A	66+88.07	621.47	621.38
1B	66+98.07	621.97	621.88
1C	67+08.07	622.47	622.38
1D	67+18.07	622.97	622.88
1E	67+28.07	623.47	623.38
1F	67+38.07	623.97	623.88
1G	67+48.07	624.47	624.38
1H	67+58.07	624.97	624.88
1I	67+68.07	625.47	625.38
1J	67+78.07	625.97	625.88
1K	67+88.07	626.47	626.38
1L	67+98.07	626.97	626.88
1M	68+08.07	627.47	627.38
1N	68+18.07	627.97	627.88
℄ Pier 1	68+28.07	628.47	628.38
2A	68+38.07	628.97	628.88
2B	68+48.07	629.47	629.38
2C	68+58.07	629.97	629.88
2D	68+68.07	630.47	630.38
2E	68+78.07	630.97	630.88
2F	68+88.07	631.47	631.38
2G	68+98.07	631.97	631.88
2H	69+08.07	632.47	632.38
2I	69+18.07	632.97	632.88
2J	69+28.07	633.47	633.38
2K	69+38.07	633.97	633.88
2L	69+48.07	634.46	634.37
2M	69+58.07	634.92	634.83
2N	69+68.07	635.33	635.24

TOP OF DECK ELEVATIONS (CONT.)

(Final elevations, not adjusted for DL deflection)

Location	Station	℄ Line	N./S. Gutter
℄ Pier 2	69+78.07	635.69	635.60
3A	69+88.07	636.01	635.92
3B	69+98.07	636.28	636.19
3C	70+08.07	636.51	636.42
3D	70+18.07	636.69	636.60
3E	70+28.07	636.83	636.74
3F	70+38.07	636.92	636.83
3G	70+48.07	636.96	636.87
3H	70+58.07	636.96	636.87
3I	70+68.07	636.92	636.83
3J	70+78.07	636.83	636.74
3K	70+88.07	636.69	636.60
3L	70+98.07	636.51	636.42
3M	71+08.07	636.28	636.19
3N	71+18.07	636.01	635.92
℄ Pier 3	71+28.07	635.69	635.60
4A	71+38.07	635.33	635.24
4B	71+48.07	634.92	634.83
4C	71+58.07	634.46	634.37
4D	71+68.07	633.97	633.88
4E	71+78.07	633.47	633.38
4F	71+88.07	632.97	632.88
4G	71+98.07	632.47	632.38
4H	72+08.07	631.97	631.88
4I	72+18.07	631.47	631.38
4J	72+28.07	630.97	630.88
4K	72+38.07	630.47	630.38
4L	72+48.07	629.97	629.88
4M	72+58.07	629.47	629.38
4N	72+68.07	628.97	628.88
℄ Pier 4	72+78.07	628.47	628.38

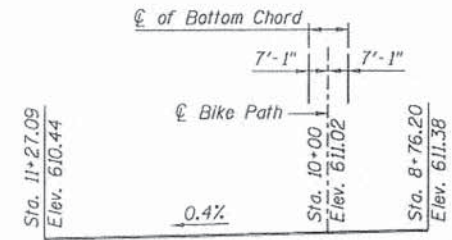
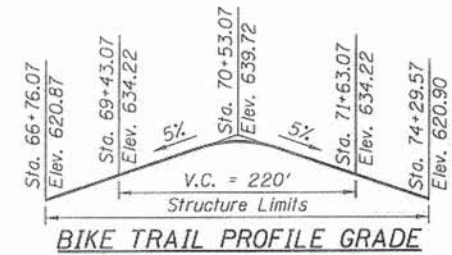
TOP OF DECK ELEVATIONS (CONT.)

(Final elevations, not adjusted for DL deflection)

Location	Station	℄ Line	N./S. Gutter
5A	72+88.07	627.97	627.88
5B	72+98.07	627.47	627.38
5C	73+08.07	626.97	626.88
5D	73+18.07	626.47	626.38
5E	73+28.07	625.97	625.88
5F	73+38.07	625.47	625.38
5G	73+48.07	624.97	624.88
5H	73+58.07	624.47	624.38
5I	73+68.07	623.97	623.88
5J	73+78.07	623.47	623.38
5K	73+88.07	622.97	622.88
5L	73+98.07	622.47	622.38
5M	74+08.07	621.97	621.88
5N	74+18.07	621.47	621.38
℄ Brg. E. Abut.	74+28.07	620.97	620.88
Bk. E. Abut.	74+29.57	620.90	620.81

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.	-	158	158
Concrete Structures	Cu. Yd.	-	186.5	186.5
Reinforcement Bars, Epoxy Coated	Pound	-	31,600	31,600
Furnishing Steel Piles HPI2x53	Foot	-	1,260	1,260
Driving Piles	Foot	-	1,260	1,260
Test Pile Steel HPI2x53	Each	-	6	6
Pile Shoes	Each	-	46	46
Concrete Sealer	Sq. Ft.	-	2,537	2,537
Pedestrian Truss Superstructure	Sq. Ft.	11,250	-	11,250
Preformed Joint Strip Seal	Foot	-	78	78
Temporary Soil Retention System	Sq. Ft.	-	1,048	1,048



FILE NAME = FILES

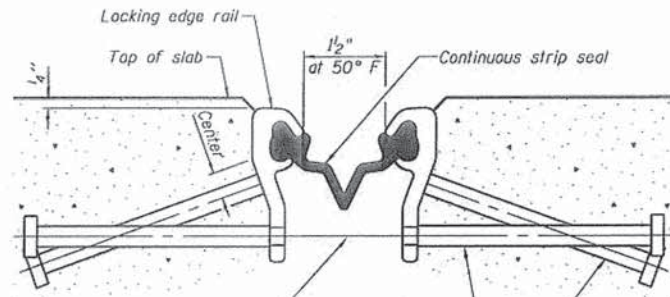


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	DATE - 10/20/2014	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS, T.B.O.M. AND MISCELLANEOUS DETAILS  
STRUCTURE NO. 016-P021  
SHEET NO. SB-2 OF SB-11 SHEETS

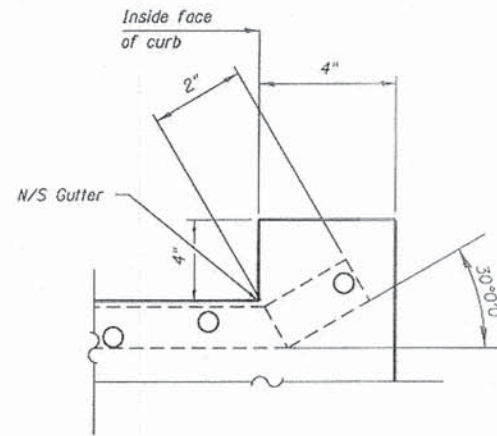
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	49
CONTRACT NO. 61A36				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



$\frac{7}{16}$ "  $\phi$  holes at 4'-0" cts. for  $\frac{3}{8}$ "  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

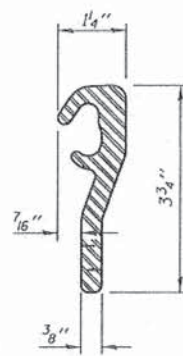
Place  $\frac{1}{2}$ "  $\phi$  x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

**SECTION THRU EXPANSION STRIP SEAL JOINT**

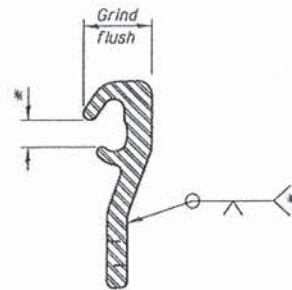


**EXPANSION JOINT AT CURB**

(Showing plate)  
(N.T.S)



**LOCKING EDGE RAIL**



**LOCKING EDGE RAIL SPLICE**

\* Omit weld at seal opening.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	78

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of  $\frac{1}{4}$ ". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be  $\frac{3}{16}$ ", sealed with a suitable sealant.

FILE NAME = #FILES



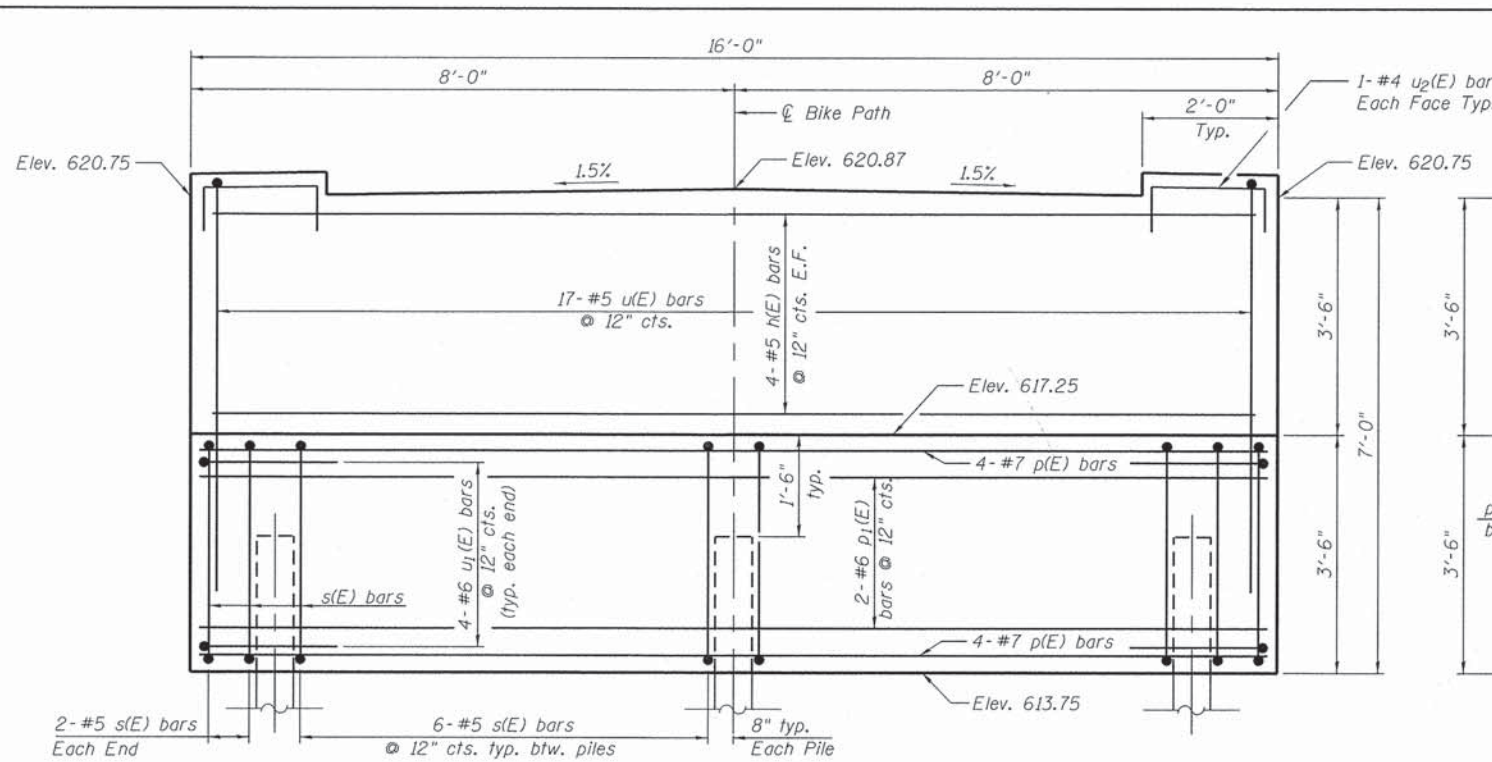
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

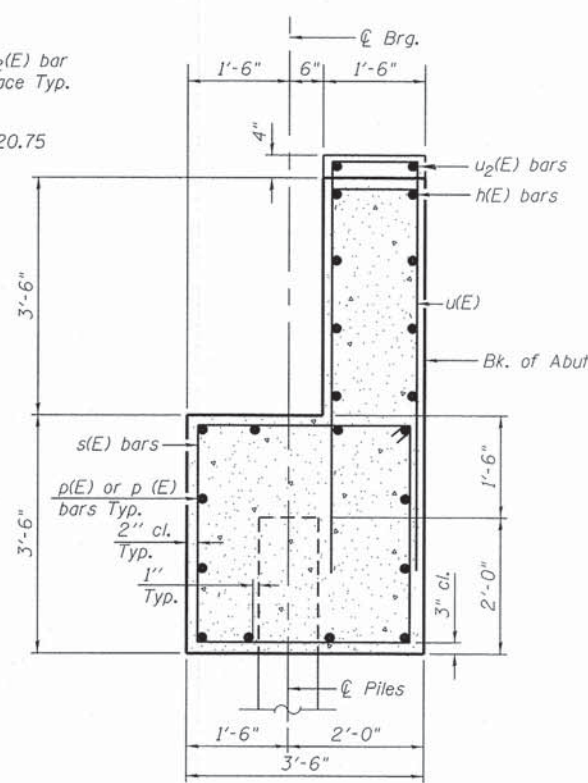
**DECK JOINT DETAILS  
STRUCTURE NO. 016-P021**

SHEET NO. SB-3 OF SB-11 SHEETS

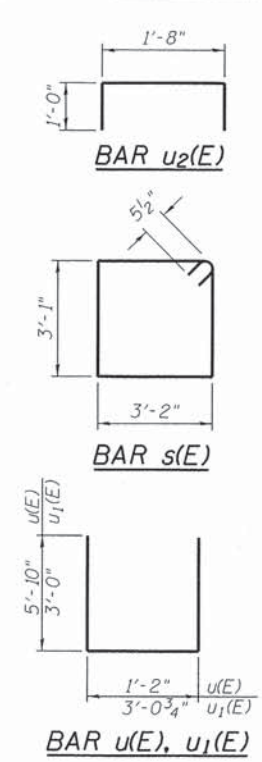
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	50
CONTRACT NO. 61A36				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



**ELEVATION**



**SEC. THRU ABUT.**



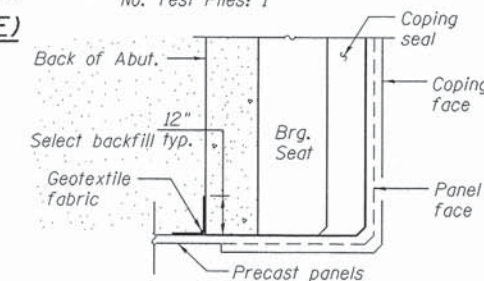
**MINIMUM BAR LAP**

#5 = 2'-6"  
#6 = 3'-0"

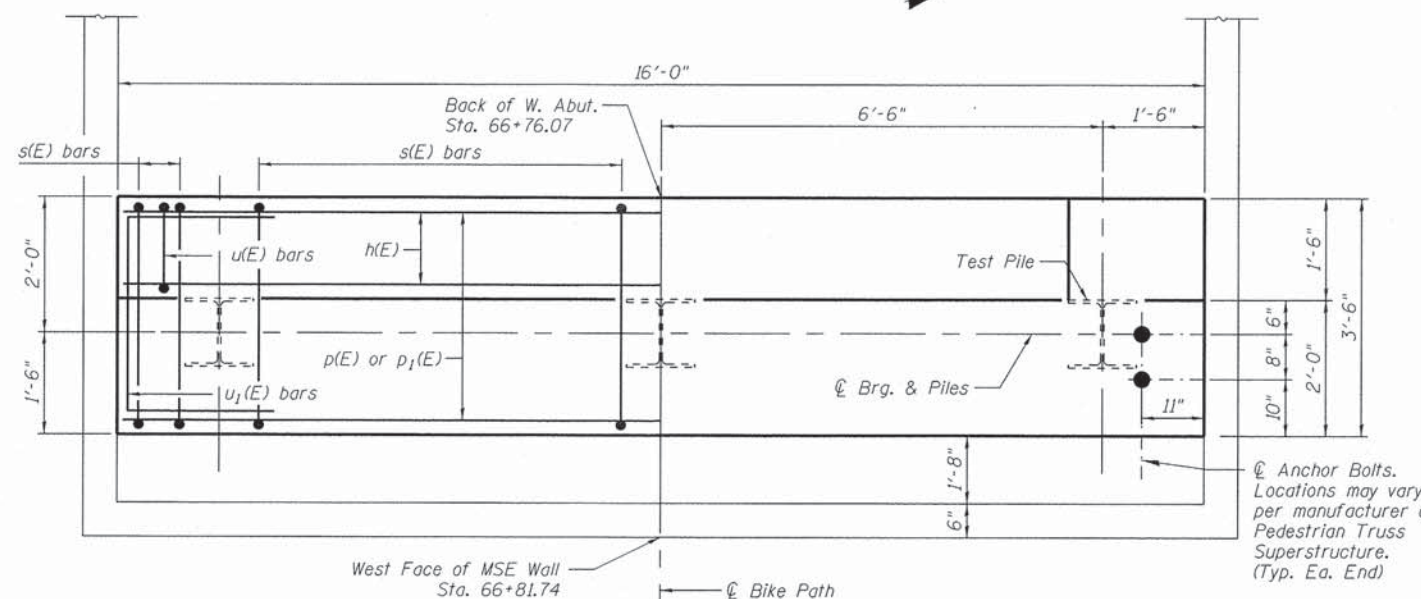
BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
h(E)	8	#5	15'-8"	—
p(E)	8	#7	15'-8"	—
p1(E)	4	#6	15'-8"	—
s(E)	16	#5	13'-5"	□
u(E)	17	#5	12'-10"	—
u1(E)	8	#6	9'-1"	—
u2(E)	4	#4	3'-8"	—
Concrete Sealer	Sq. Ft.	140		
Concrete Structures	Cu. Yd.	10.6		
Reinforcement Bars, Epoxy Coated	Pound	1,050		
Furnishing Steel Piles HP 12x53	Foot	90		
Driving Piles	Foot	90		
Test Pile Steel HP 12x53	Each	1		
Pile Shoes	Each	3		

**PILE DATA**

Type: Steel HP 12x53 with pile shoes  
Nominal Required Bearing: 307 kips  
Factored Resistance Available: 169 kips  
Est. Length: 45 ft  
No. Production Piles: 2  
No. Test Piles: 1



**SECTION A-A**

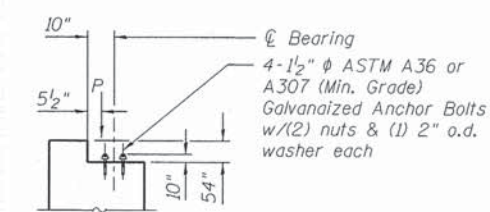


**REINFORCEMENT SHOWN**

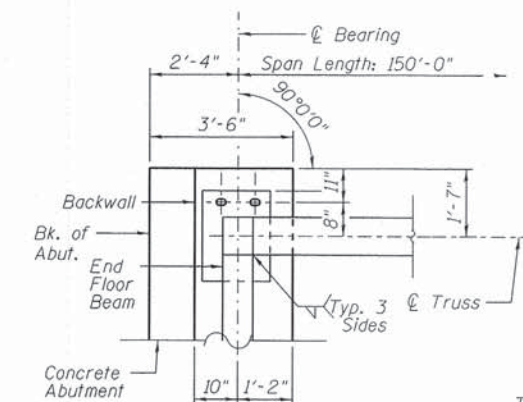
**DIMENSIONS SHOWN**

**PLAN**

\*Dimensions are based on Contech's information and may vary depending on final manufacturer.

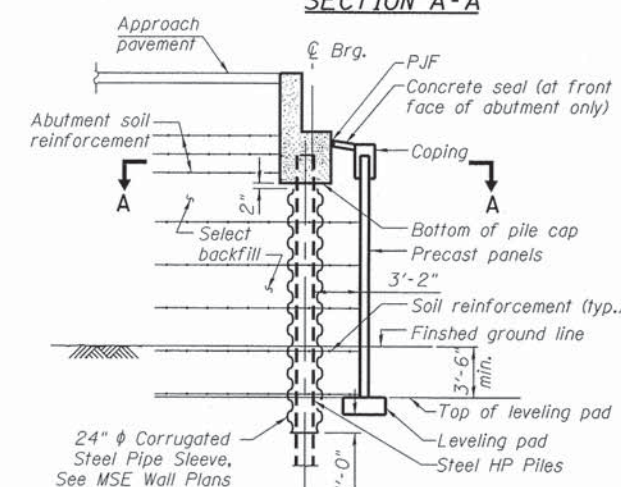


**ANCHOR BOLT ELEVATION\***



**BEARING ASSEMBLY PLAN\***

Typ. Each Corner



**MSE WALL ELEVATION**

The cost of Furnishing and Installation of 24" dia. Corrugated Steel Pipe Sleeve shall be included in the cost of Furnishing Steel Piles HP 12x53, such costs include the furnishing and placing of backfill material at the entire annular space between HP Pile and Corrugated Steel Pipe Sleeve. The length of the Corrugated Steel Pipe Sleeve is based on the Corrugated Steel Pipe Sleeve extending from 2" below the bottom of the abutment cap to one foot below the bottom of the MSE wall leveling pad. The fine aggregate backfill shall be as according to the special provisions. The Corrugated Steel Pipe Sleeve must be gage 10 min.

**Notes:**

See MSE Wall plans for details.  
The MSE Wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 1.5 kips/ft. of abutment.  
F.F. = Front Face  
B.F. = Back Face  
E.F. = Each Face

Fill the entire annular space between the piles and casings with dry loose clean sand or fine aggregate. Cost included with Furnishing Steel Piles HP 12x53.

FILE NAME = #FILES



USER NAME = #USER#	DESIGNED - MMZ	REVISED -
PLOT SCALE = #SCALE#	DRAWN - MMZ	REVISED -
PLOT DATE = #DATE#	CHECKED - JPM/MMH/TPG	REVISED -
	DATE - 10/20/2014	REVISED -

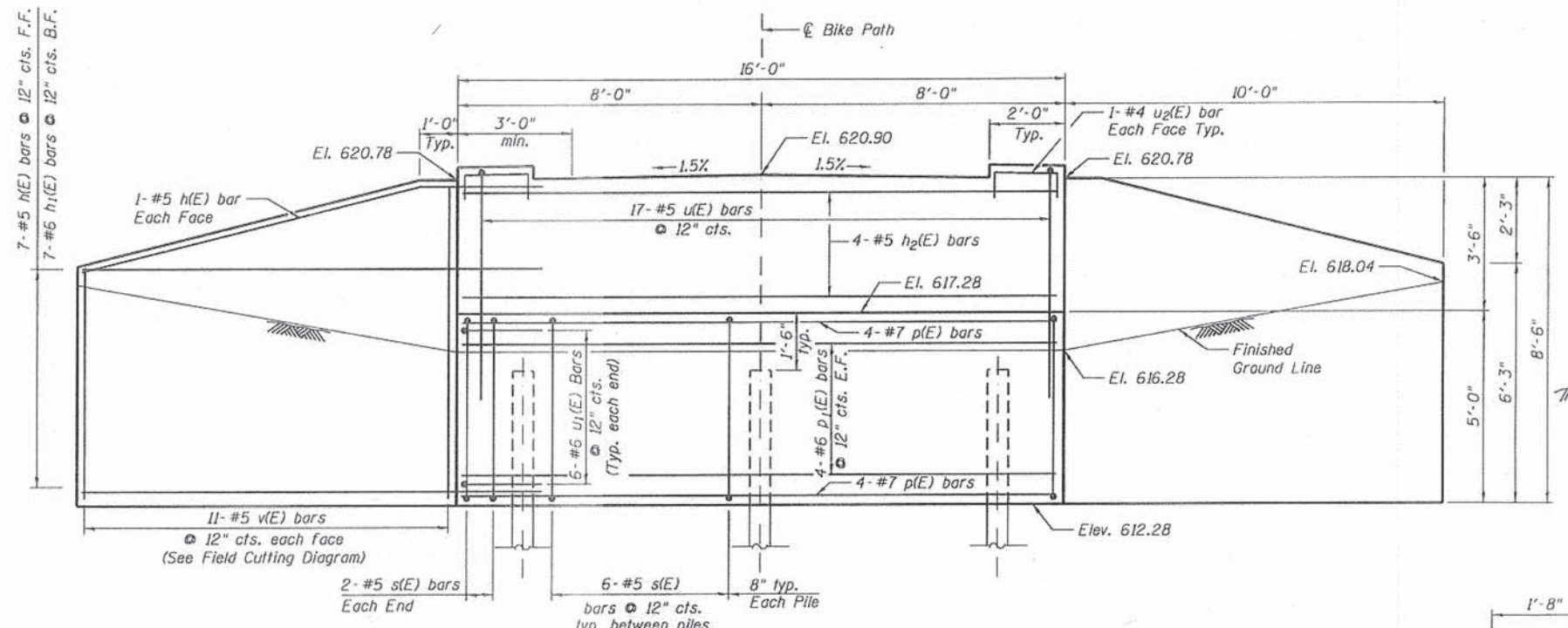
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT  
STRUCTURE NO. 016-P021**

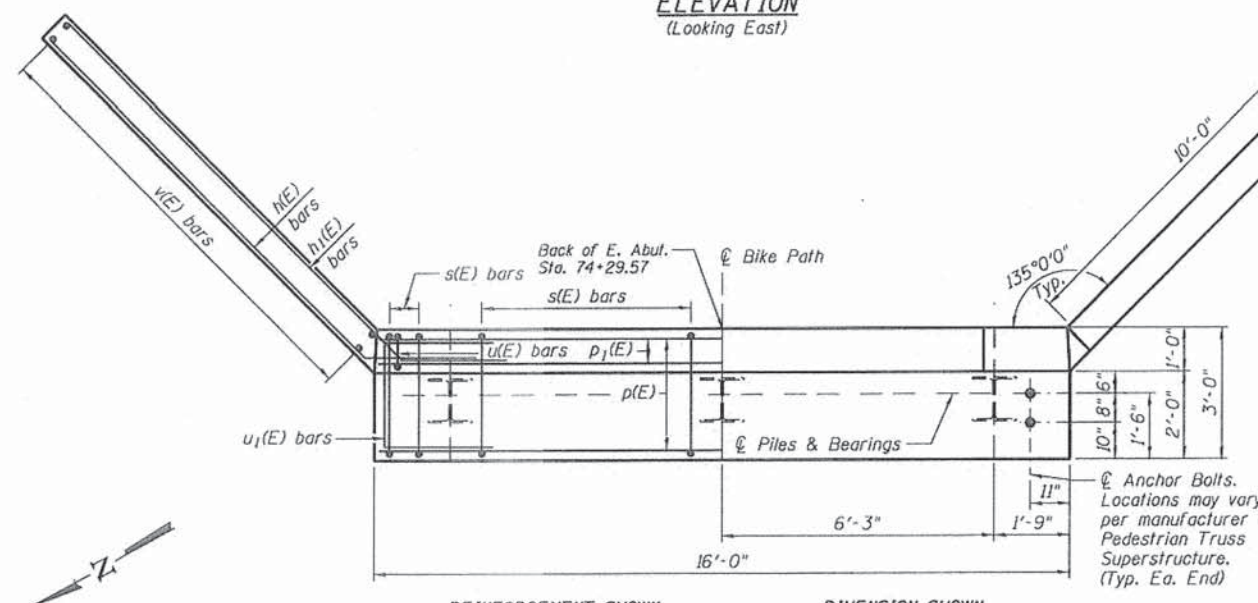
SHEET NO. SB-4 OF SB-11 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	51
CONTRACT NO. 61A26				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

7-#5 NE bars @ 12" cts. F.F.  
7-#6 h1(E) bars @ 12" cts. B.F.

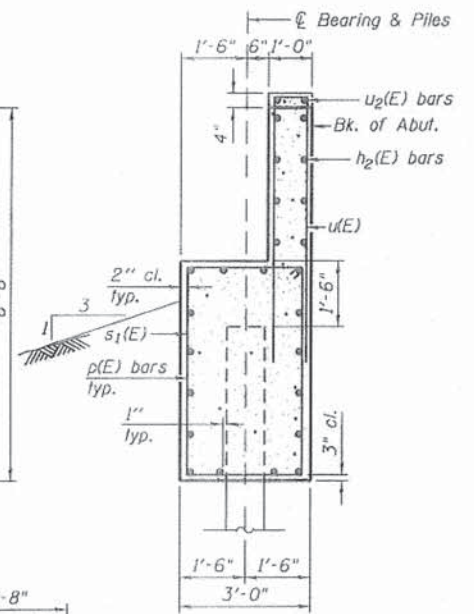


**ELEVATION**  
(Looking East)



**PLAN**

\*Dimensions are based on Contech's information and may vary depending on final manufacturer.

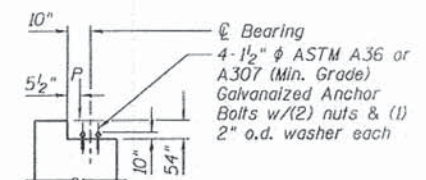


**SEC. THRU ABUT.**

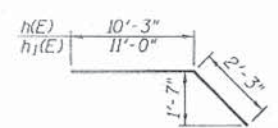
**BAR u2(E)**

**MINIMUM BAR LAP**

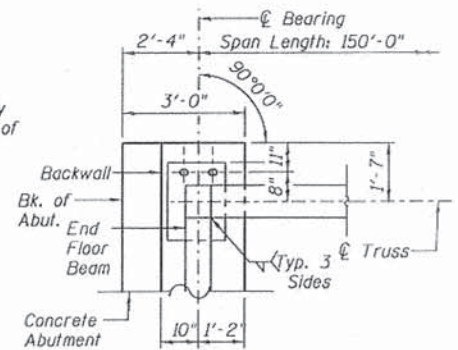
#5 = 2'-6"  
#6 = 3'-0"



**ANCHOR BOLT ELEVATION**

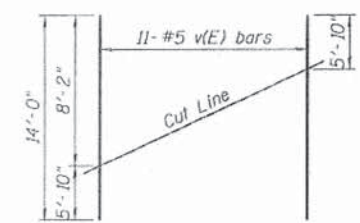


**BAR h(E) & h1(E)**



**BEARING ASSEMBLY PLAN**

Typ. Each Corner



**FIELD CUTTING DIAGRAM**

Order v(E) full length. Cut as shown and use remainder of bars in opposite face.

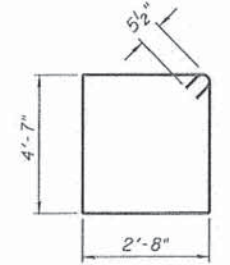
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	18	#5	12'-6"	
h1(E)	14	#6	13'-3"	
h2(E)	8	#5	15'-8"	
p(E)	8	#7	15'-8"	
p1(E)	8	#6	15'-8"	
s1(E)	16	#5	15'-5"	
u(E)	17	#5	12'-4"	
u1(E)	12	#6	8'-7"	
u2(E)	4	#4	3'-8"	
v(E)	22	#5	14'-0"	
Concrete Structures		Cu. Yd.	15.4	
Reinforcement Bars, Epoxy Coated		Pound	2,060	
Furnishing Steel Piles HP 12x53		Foot	70	
Driving Piles		Foot	70	
Test Pile Steel HP 12x53		Each	1	
Pile Shoes		Each	3	
Concrete Sealer		Sq. Ft.	209	

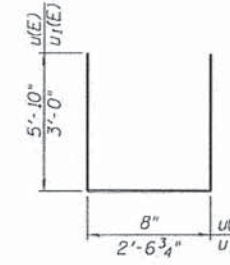
Note:  
F.F. = Front Face  
B.F. = Back Face  
E.F. = Each Face

**PILE DATA**

Type: Steel HP 12x53 with pile shoes  
Nominal Required Bearing: 331 kips  
Factored Resistance Available: 184 kips  
Est. Length: 35 ft  
No. Production Piles: 2  
No. Test Piles: 1



**BAR s1(E)**



**BAR u(E), u1(E)**

FILE NAME = FILES

**Primera**

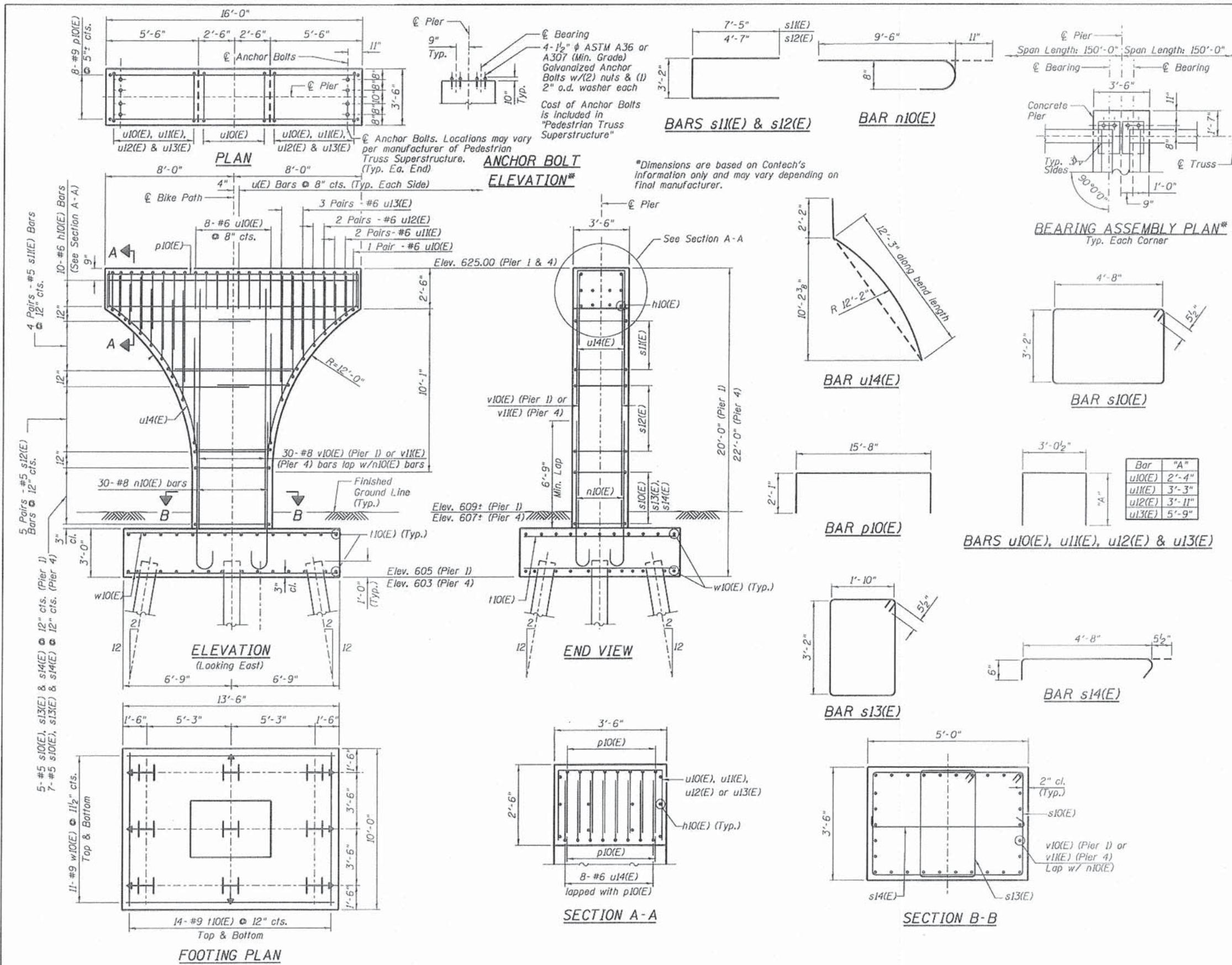
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	DATE - 10/20/2014	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT**  
**STRUCTURE NO. 016-P021**

SHEET NO. SB-5 OF SB-11 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	52
CONTRACT NO. 61A36				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



### BILL OF MATERIAL

Bar	Size	Length	Shape	No.	Pier 1	Pier 4
h10(E)	#6	15'-8"	—	10	10	
n10(E)	#8	10'-5"	—	30	30	
p10(E)	#9	19'-10"	—	8	8	
s10(E)	#5	16'-7"	—	5	7	
s11(E)	#5	18'-0"	—	8	8	
s12(E)	#5	12'-4"	—	10	10	
s13(E)	#5	10'-11"	—	5	7	
s14(E)	#5	5'-8"	—	5	7	
u10(E)	#9	9'-8"	—	28	28	
u10(E)	#6	7'-9"	—	12	12	
u11(E)	#6	9'-7"	—	8	8	
u12(E)	#6	10'-11"	—	8	8	
u13(E)	#6	14'-7"	—	12	12	
u14(E)	#6	14'-5"	—	16	16	
v10(E)	#8	16'-10"	—	30		
v11(E)	#8	18'-10"	—		30	
w10(E)	#9	13'-2"	—	22	22	
Structure Excavation	Cu. Yd.	37		37		
Concrete Structures	Cu. Yd.	33.9		35.2		
Reinforcement Bars, Epoxy Coated	Pound	6,310		6,540		
Furnishing Steel Piles HP12x53	Foot	280		280		
Driving Piles	Foot	280		280		
Test Pile Steel HP12x53	Each	1		1		
Pile Shoes	Each	9		9		
Concrete Sealer	Sq. Ft.	463		497		
Temporary Soil Retention System	Sq. Ft.	245		245		

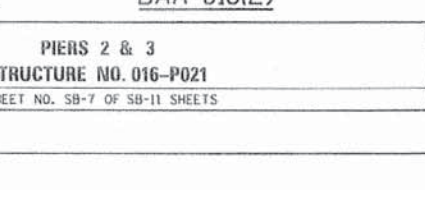
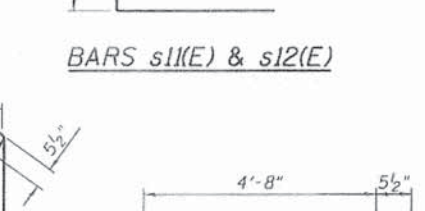
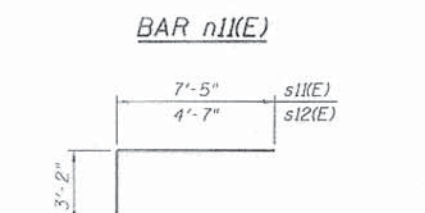
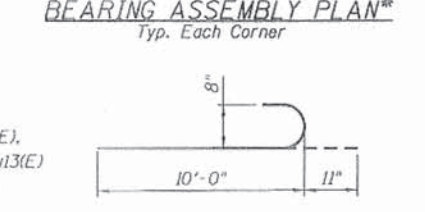
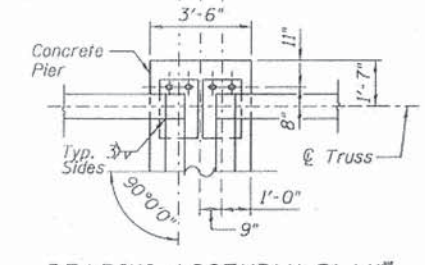
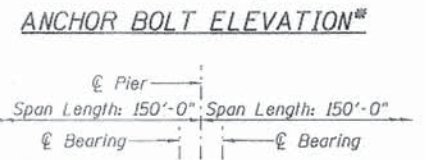
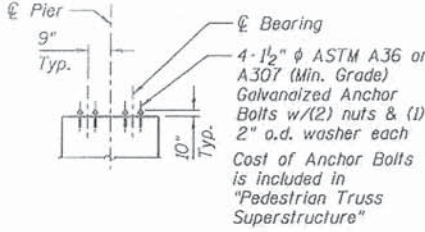
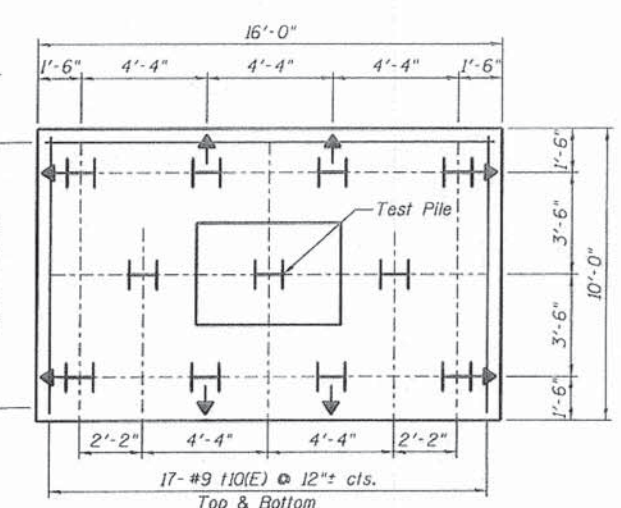
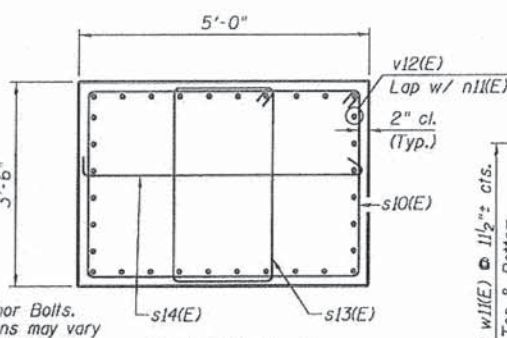
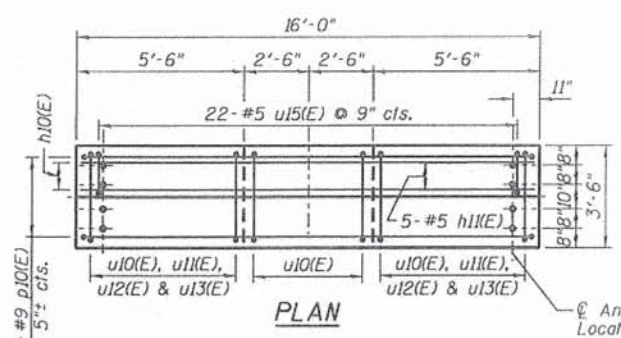
- ### NOTES:
- Concrete clear cover shall be 2" minimum unless noted otherwise.
  - All edges have standard 3/4" chamfers except as noted.
  - Space Reinforcement in Cap to miss Anchor Bolts.
  - Min. Lap for Bar #5 = 2'-6", #6 = 3'-0", #8 = 6'-9".
  - Reinforcement bars designated (E) shall be epoxy coated.

### PILE DATA

Type: Steel HP12x53 with pile shoes  
 Nominal Required Bearing: 257 kips (Pier 1 & 4)  
 Factored Resistance Available: 142 kips (Pier 1 & 4)  
 Est. Length: 35 ft (Pier 1 & 4)  
 No. Production Piles: 8 per pier  
 No. Test Piles: 1 per pier

### LEGEND

E.F. = Each Face  
 - Battered Pile



**BILL OF MATERIAL \*\***

Bar	Size	Length	Shape	No.
h10(E)	#6	15'-8"	—	20
h11(E)	#5	15'-8"	—	10
h1(E)	#8	10'-11"	—	60
p10(E)	#9	19'-10"	—	16
s10(E)	#5	16'-7"	—	24
s11(E)	#5	18'-0"	—	16
s12(E)	#5	12'-4"	—	20
s13(E)	#5	10'-11"	—	24
s14(E)	#5	5'-8"	—	24
h10(E)	#9	9'-8"	—	68
u10(E)	#6	7'-9"	—	24
u11(E)	#6	9'-7"	—	16
u12(E)	#6	10'-11"	—	16
u13(E)	#6	14'-7"	—	24
u14(E)	#6	14'-5"	—	32
u15(E)	#5	8'-9"	—	44
v12(E)	#8	23'-10"	—	60
w11(E)	#9	15'-8"	—	44
Structure Excavation	Cu. Yd.			84
Concrete Structures	Cu. Yd.			91.4
Reinforcement Bars, Epoxy Coated	Pound			15,640
Furnishing Steel Piles HP12x53	Foot			540
Driving Piles	Foot			540
Test Pile Steel HP12x53	Each			2
Pile Shoes	Each			22
Concrete Sealer	Sq. Ft.			1,228
Temporary Soil Retention System	Sq. Ft.			560

\*\* Includes both Piers

**PILE DATA**

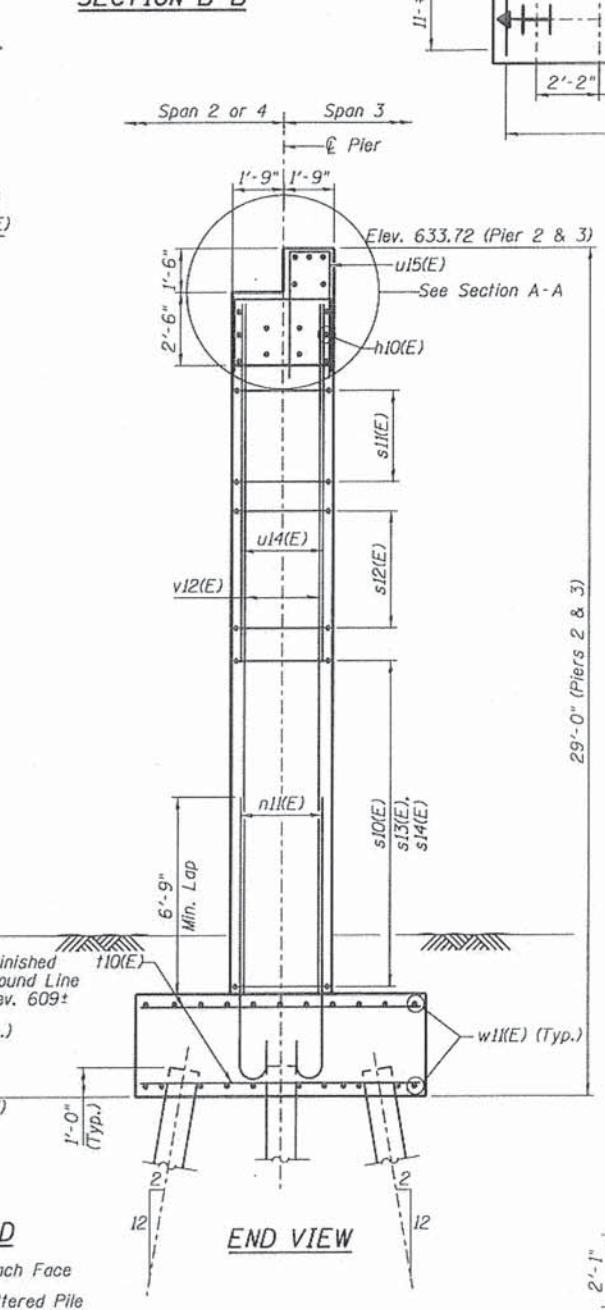
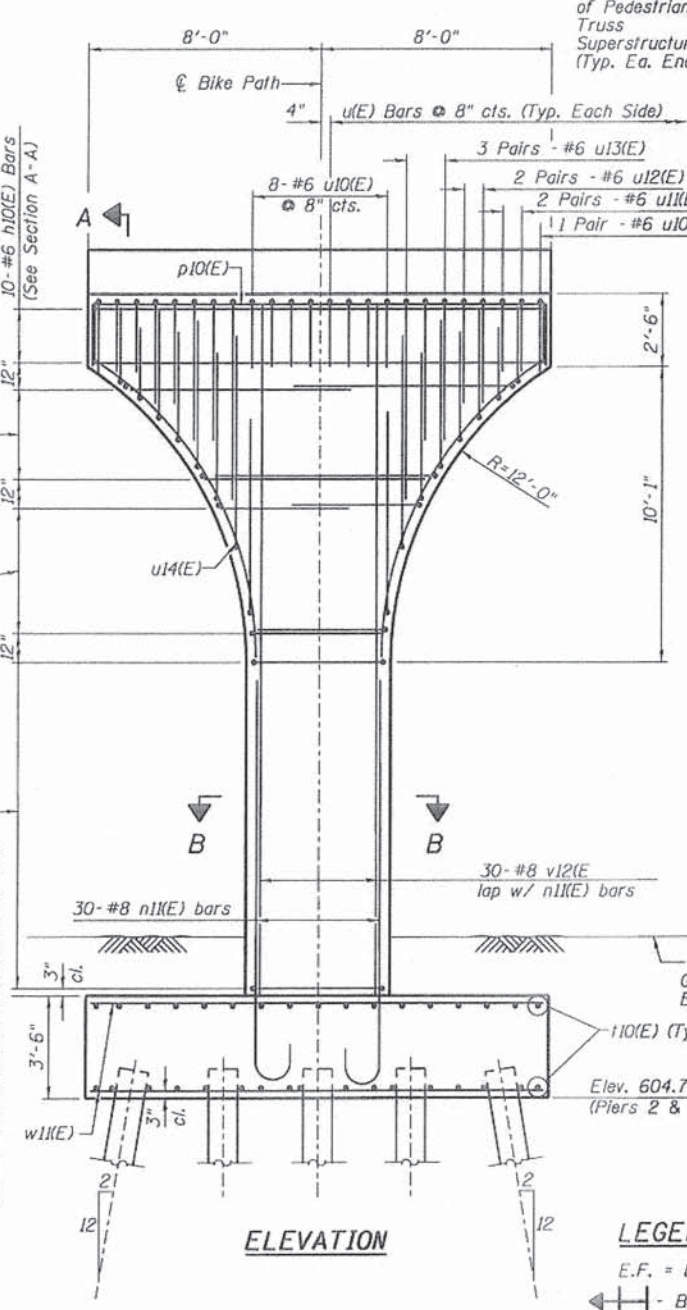
Type: Steel HP12x53 with pile shoes  
 Nominal Required Bearing: 261 kips  
 Factored Resistance Available: 144 kips  
 Est. Length: 27 ft  
 No. Production Piles: 10 per pier  
 No. Test Piles: 1 per pier

**NOTES:**

- Concrete clear cover shall be 2" minimum unless noted otherwise.
- All edges have standard 3/4" chamfers except as noted.
- Space Reinforcement in Cap to miss Anchor Bolts.
- Min. Lap for Bar #5 = 2'-6", #6 = 3'-0", #8 = 6'-9".
- Reinforcement bars designated (E) shall be epoxy coated.

**BARS u10(E), u11(E), u12(E) & u13(E)**

Bar	"A"
u10(E)	2'-4"
u11(E)	3'-3"
u12(E)	3'-11"
u13(E)	5'-11"



**LEGEND**

E.F. = Each Face  
 Battered Pile

**Primera**

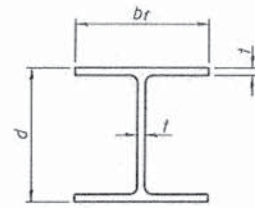
105 N. Main St., Suite 100, Chicago, IL 60610-3300  
 312.233.4100 • 312.233.4105

USER NAME = RUSER	DESIGNED - MMZ	REVISED -
PLLOT SCALE = 1/8" = 1'-0"	DRAWN - MMZ	REVISED -
PLLOT DATE = 10/20/2014	CHECKED - JPM/MMH/TPG	REVISED -
	DATE - 10/20/2014	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

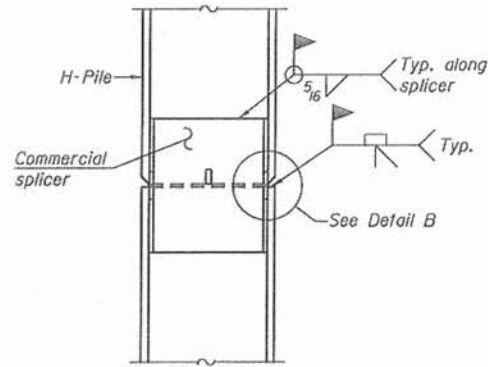
**PIERS 2 & 3**  
**STRUCTURE NO. 016-P021**  
 SHEET NO. SB-7 OF SB-11 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	54
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

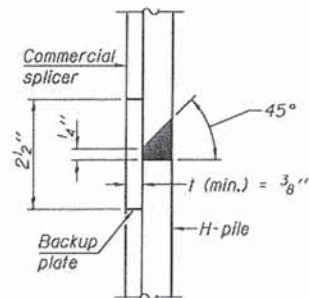


STEEL PILE TABLE

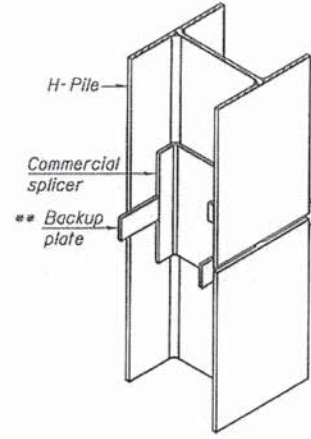
Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

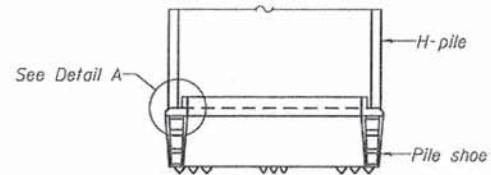


DETAIL "B"

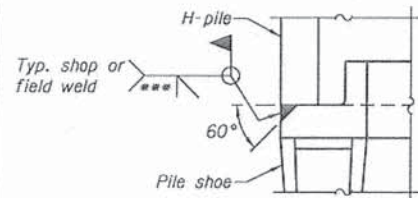


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

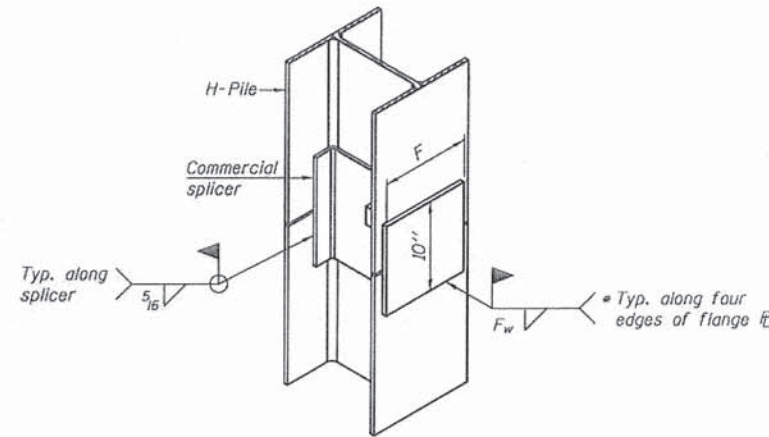


ELEVATION



DETAIL A

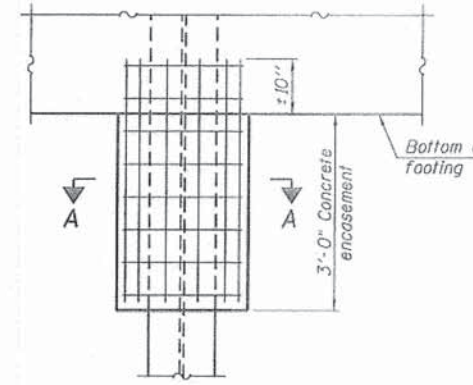
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

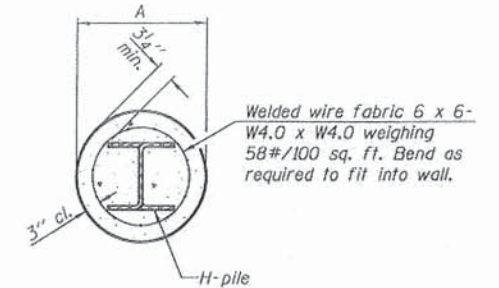
- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).



ELEVATION

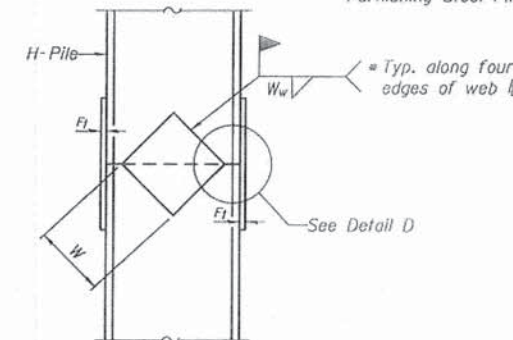
PILE ENCASUREMENT

Note:  
Concrete, reinforcement bars and welded wire fabric are incidental to Furnishing Steel Piles.

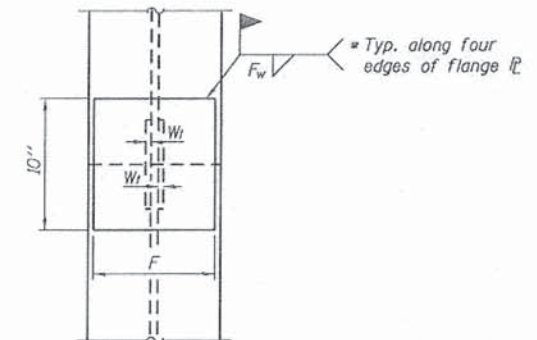


SECTION A-A

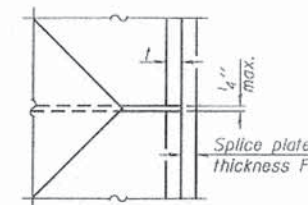
Note:  
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois  
 DATE STARTED: 12/14/12 COMPLETED: 12/14/12 GROUND ELEVATION: 619.5 ft URS PILE SIZE: 6 inch  
 DRILLING CONTRACTOR: K & S Drilling GROUND WATER LEVELS:  
 DRILLING METHOD: Hollow Stem Augers AT TIME OF DRILLING  
 LOGGED BY: DM CHECKED BY: AR AT END OF DRILLING  
 NOTES: Near west abut. of proposed METRA bridge AFTER DRILLING

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N-VALUE)	POCKET PEN. (psi)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		TOPSOIL - dark gray, silty soil, clay with some organics, gray and dark brown, soft	SS 1		5-8-13 (22)	2.5		20				
1		SAND, medium grained with gravel; brown; moist, loose - (SP)	SS 2		9-9-12 (21)			11	17	2	15	
3		SILTY CLAY with traces of sand & gravel; gray medium stiff to stiff - (CL, ML)	SS 3		11-15-24 (37)	3.0		10				
4			SS 4		5-6-8 (14)	4.5		10				
5			SS 5		4-6-8 (14)	3.75		10				
6			SS 6		4-6-7 (12)	2.75		18				
13		SILTY SANDY CLAY; traces of gravel; moist to very moist; medium stiff - (CL, S)	SS 7		9-7-10 (17)	2.0		16				
20		SILTY CLAY with traces of sand and gravel; gray; moist; stiff to very stiff - (CL, ML with sand)	SS 8		3-6-9 (16)	3.25		20				
21			SS 9		6-8-13 (21)	4.25		10				
30			SS 10		7-11-14 (29)	4.25		14				
35			SS		6-8-8	3.75		12				

(Continued Next Page)

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N-VALUE)	POCKET PEN. (psi)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
35		SILTY CLAY with traces of sand and gravel; gray; moist; stiff to very stiff - (CL, ML with sand) (continued)	SS 11		LIB							
40			SS 12		5-9-12 (21)	4.5		13				
45			SS 13		7-7-12 (19)	2.75		12				
50		CLAY with gravel; gray; moist to damp; very stiff to hard - (CL)	SS 14		21-30-34 (62)	4.9		9				
55			SS 15		20-34-41 (75)	4.5		10				
60		SILT with gravel; gray; dense, hard, to very hard - (ML with gravel)	SS 16		47-59-41							
62		SILTSTONE - very hard - Reported at 62.75 feet. Bottom of hole at 69.8 feet.	SS									

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois  
 DATE STARTED: 12/17/12 COMPLETED: 12/17/12 GROUND ELEVATION: 520.0 ft URS PILE SIZE: 6 inch  
 DRILLING CONTRACTOR: K & S Drilling GROUND WATER LEVELS:  
 DRILLING METHOD: Hollow Stem Augers AT TIME OF DRILLING: 59.2 ft / Elev 551.0 ft  
 LOGGED BY: DM CHECKED BY: AR AT END OF DRILLING: 50.0 ft / Elev 550.0 ft  
 NOTES: Near Pier #1 of proposed METRA bridge AFTER DRILLING

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N-VALUE)	POCKET PEN. (psi)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
9		LEAN CLAY with traces of sand and gravel; dark gray, wet, soft	SS 1		7-0-6 (14)	3.0		03				
10		LEAN CLAY with traces of sand and gravel; dark brown to brown; moist; medium stiff to stiff - (CL with sand)	SS 2		7-0-6 (14)	4.5		18				
11			SS 3		5-9-11 (23)	4.5		15				
12			SS 4		6-7-9 (19)	4.5		17				
13			SS 5		4-6-10 (16)	3.5		20				
14			SS 6		3-4-5 (12)	3.75		30				
18		SILTY CLAY with gravel; gray; moist to very moist; stiff; (CL-ML with gravel)	SS 7		2-7-5 (10)	2.5		14				
19			SS 8		3-6-8 (14)	2.75		19				
20			SS 9		6-8-12 (20)	2.75		14				
21			SS 10		5-0-9 (15)	5.25		12				
22			SS		6-7-5	3.0		13				

(Continued Next Page)

FILE NAME: #FILES



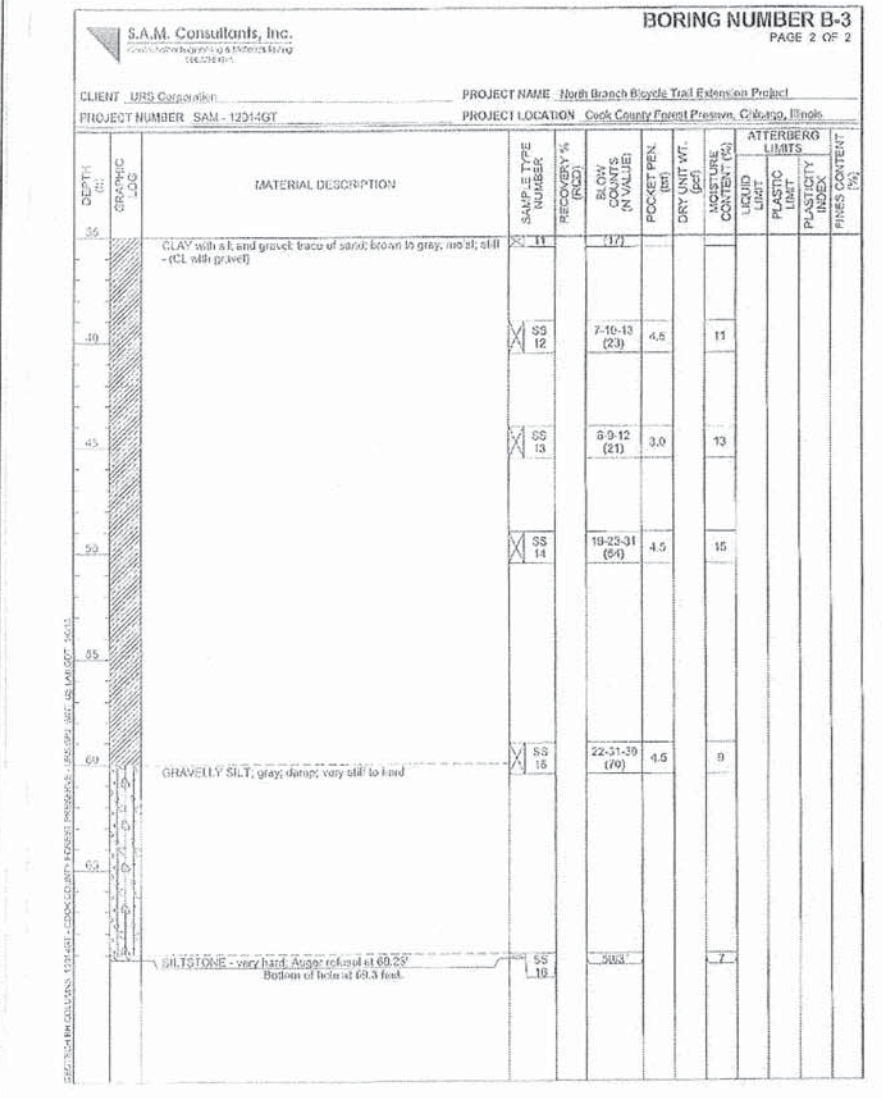
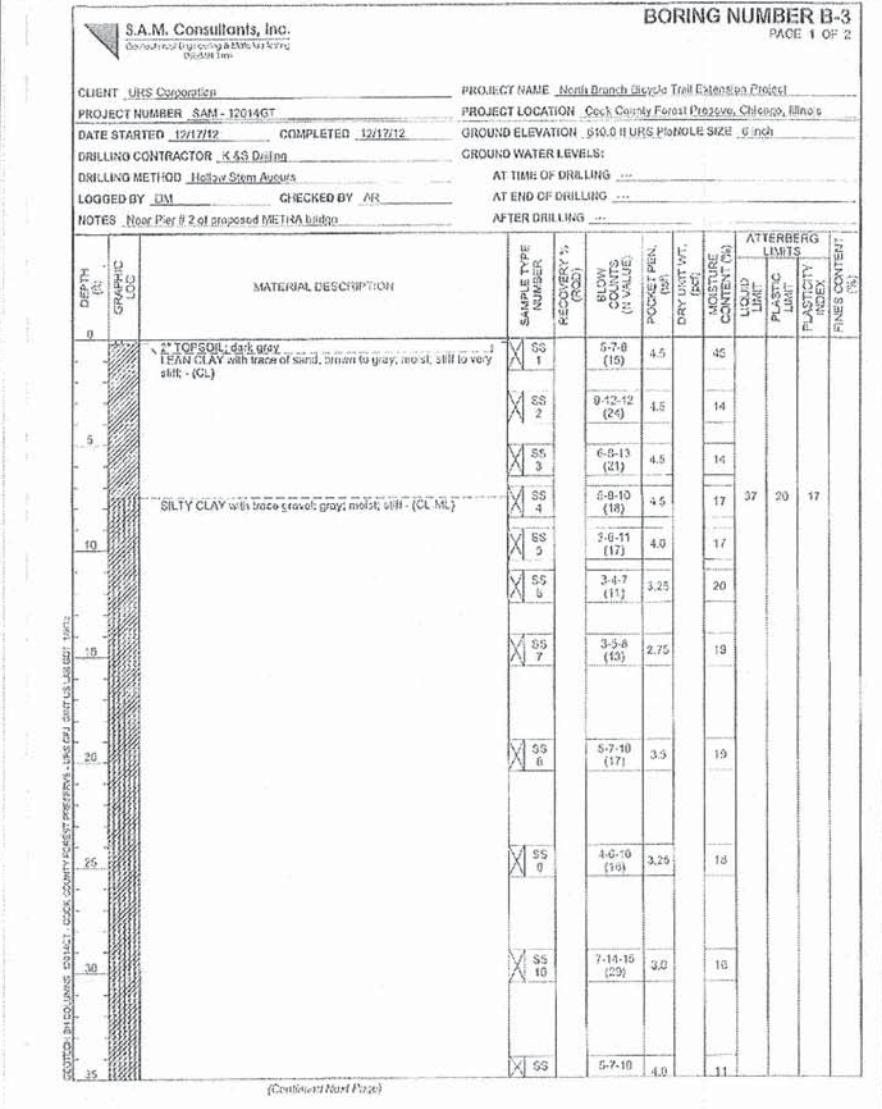
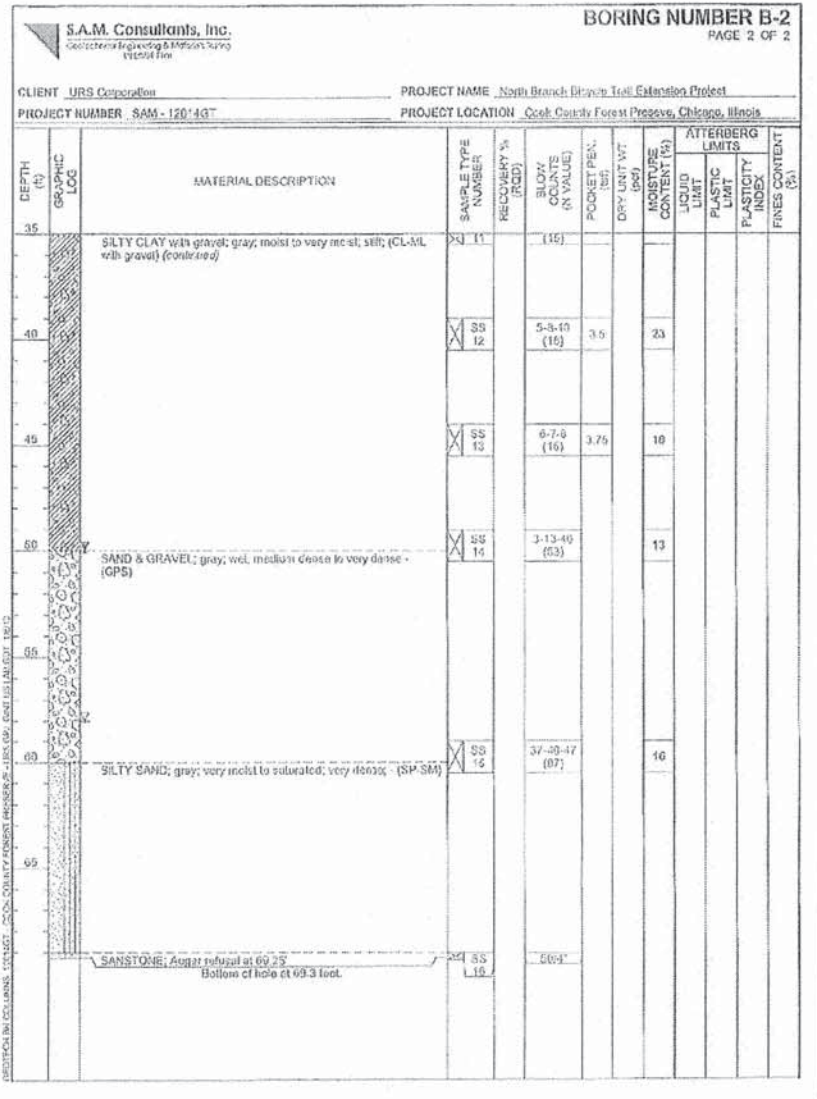
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	DATE: 10/20/2014	REVISED: -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS 1  
 STRUCTURE NO. 016-P021  
 SHEET NO. SB-9 OF SB-11 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	56
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				





FILE NAME: 07115



USER NAME: susers  
 PLOT SCALE: sSCALE  
 PLOT DATE: sDATE

DESIGNED: MMZ  
 DRAWN: MMZ  
 CHECKED: JPM/MMH/TPG  
 DATE: 10/20/2014

REVISED: -  
 REVISED: -  
 REVISED: -  
 REVISED: -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS 2  
 STRUCTURE NO. 016-P021  
 SHEET NO. SB-10 OF SB-11 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	57
CONTRACT NO. 61A86				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois  
 DATE STARTED: 12/18/12 COMPLETED: 12/18/12 GROUND ELEVATION: 609.5 ft URS PLAN: 0.5 inch  
 DRILLING CONTRACTOR: K&S Drilling GROUND WATER LEVELS:  
 DRILLING METHOD: Hollow Stem Augers AT TIME OF DRILLING: -9.0 ft Elev 599.5 ft  
 LOGGED BY: DM CHECKED BY: AR AT END OF DRILLING: 49.0 ft Elev 559.5 ft  
 NOTES: Hour Per 83 of proposed METRA bid AFTER DRILLING: ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RCD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	ATTERBERG LIMITS					
								LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	FINES CONTENT (%)		
0		1" TOP SOIL; dark gray LEAN CLAY with organics; gray; moist; medium stiff to soft; (CL)	SS 1		4-4-6 (9)	3.75		26					
			SS 2		3-3-5 (8)	3.0		17					
6		CLAY with GRAVEL; gray; moist; medium stiff to stiff; (CLG)	SS 3		4-5-9 (14)	4.0		21					
			SS 4		5-6-8 (15)	4.0		14	39	21	18		
			SS 5		3-0-7 (12)	2.75		20					
			SS 6		3-6-7 (13)	3.5		18					
			SS 7		3-0-6 (14)	2.75		19					
20		SILTY CLAY with traces of gravel and sand; moist to very moist; medium stiff to stiff; - (CL-ML with gravel)	SS 8		9-3-7 (11)	2.5		17					
			SS 9		5-2-3 (16)	4.5		21					
30		Water encountered at 28 feet	SS 10		5-11-12 (23)	4.5		13					
			SS		7-12-14	4.5		11					

(Continued from Page)

CLIENT: URS Corporation PROJECT NAME: North Branch Bicycle Trail Extension Project  
 PROJECT NUMBER: SAM-12014GT PROJECT LOCATION: Cook County Forest Preserve, Chicago, Illinois

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RCD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS				
									LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	FINES CONTENT (%)	
35		SILTY CLAY with traces of gravel and sand; moist to very moist; medium stiff to stiff; - (CL-ML with gravel)	SS 11		(29)								
			SS 12		9-13-16 (26)	4.5		15	28	9	16		
40		Water encountered at 40 feet (continued)	SS 13		16-28-32 (60)	4.8		12					
50		CLAY with GRAVEL; gray; moist to damp; stiff to very stiff - (CLG)	SS 14		17-20-33 (62)	4.5		10					
60		WEATHERED ROCK at 60 feet - bottom at 69.5 feet	SS 15		22-31-37 (68)	4.5		22					
65			SS 16										

FILE NAME: #FILES



USER NAME: #USER#	DESIGNED: MMZ	REVISED: -
PLOT SCALE: #SCALE#	DRAWN: MMZ	REVISED: -
PLOT DATE: #DATE#	CHECKED: JPM/MMH/TPC	REVISED: -
	DATE: 10/20/2014	REVISED: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3  
STRUCTURE NO. 016-P021

SHEET NO. SB-11 OF SB-11 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	58
CONTRACT NO. 61A36				
ILLINOIS FED. AID PROJECT				

Benchmark: BM #102 - Top of fire hydrant chain bolt, located at the west side of Central Ave., about 250 feet south of N. Louise Ave., Elev. 617.45

Existing Structure: None.



*Michael B. Quirin*  
1/14/15

MICHAEL B. QUIRIN DATE  
LICENSED STRUCTURAL ENGINEER  
STATE OF ILLINOIS 081-6070  
EXPIRES 11/30/2014

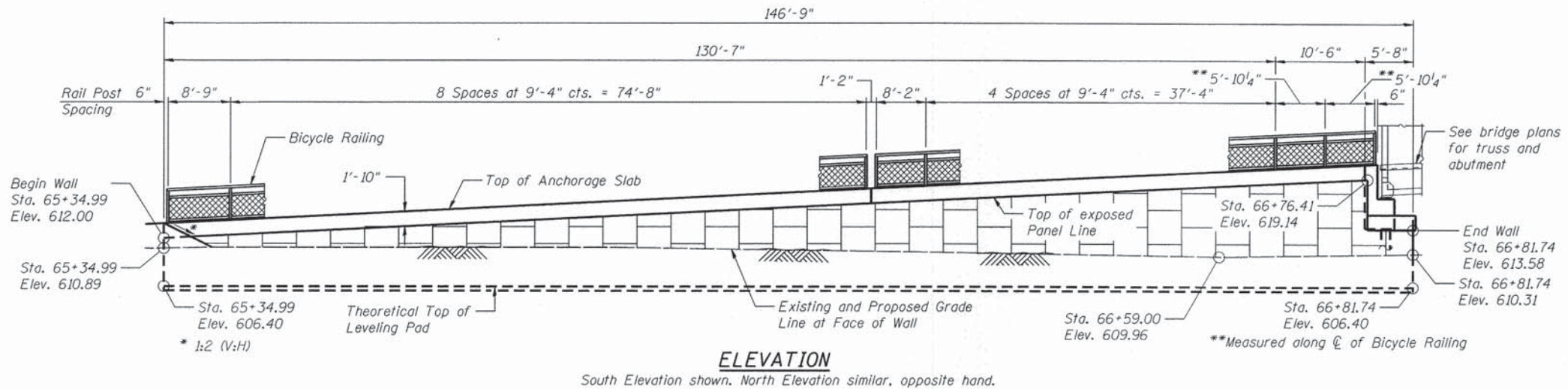
I certify that to the best of knowledge, information and belief, this design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.

**INDEX OF SHEETS**

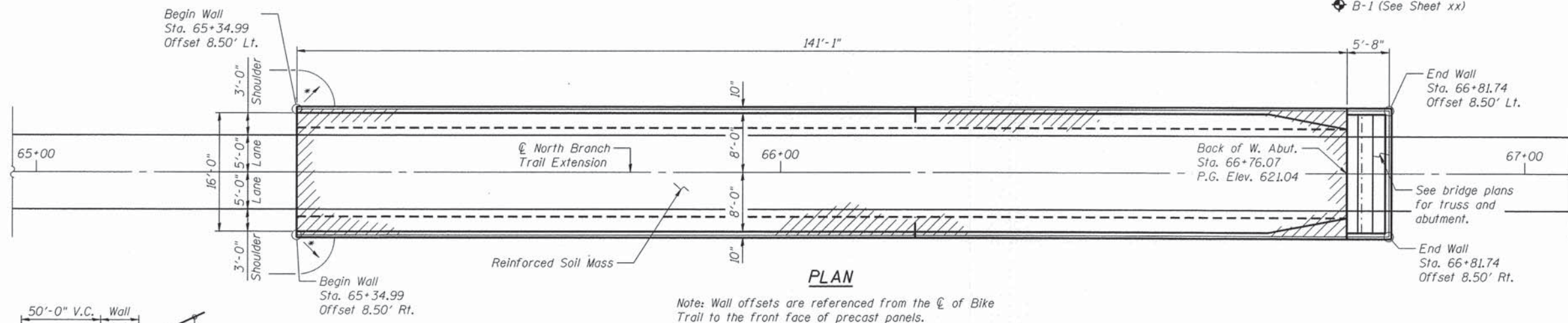
- 1 General Plan and Elevation
- 2 MSE Wall Details
- 3 Anchorage Slab Details
- 4 Bicycle Railing

**BILL OF MATERIAL**

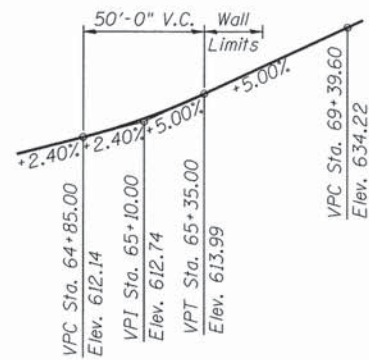
Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	106
Structure Excavation	Cu. Yd.	493
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	106
Concrete Structures	Cu. Yd.	31.0
Reinforcement Bars, Epoxy Coated	Pound	3,640
Bicycle Railing	Foot	284
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	2,793



**ELEVATION**  
South Elevation shown. North Elevation similar, opposite hand.



**PLAN**  
Note: Wall offsets are referenced from the  $\text{\textcircled{C}}$  of Bike Trail to the front face of precast panels.



**PROFILE GRADE**  
Along  $\text{\textcircled{C}}$  North Branch Trail Extension

**GENERAL NOTES**

Reinforcement bars designated (E) shall be epoxy coated.

See Special Provisions for Mechanically Stabilized Earth Retaining Wall design and construction requirements.

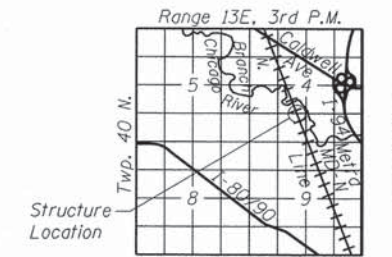
**LIVE LOADING**  
90 psf Pedestrian Live Load  
20,000 lb. Vehicle Load (H-10 Truck)

**DESIGN STRESSES**

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

**PRECAST UNITS**  
 $f'_c = 4,500$  psi (Precast Panels)

**DESIGN SPECIFICATIONS**  
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

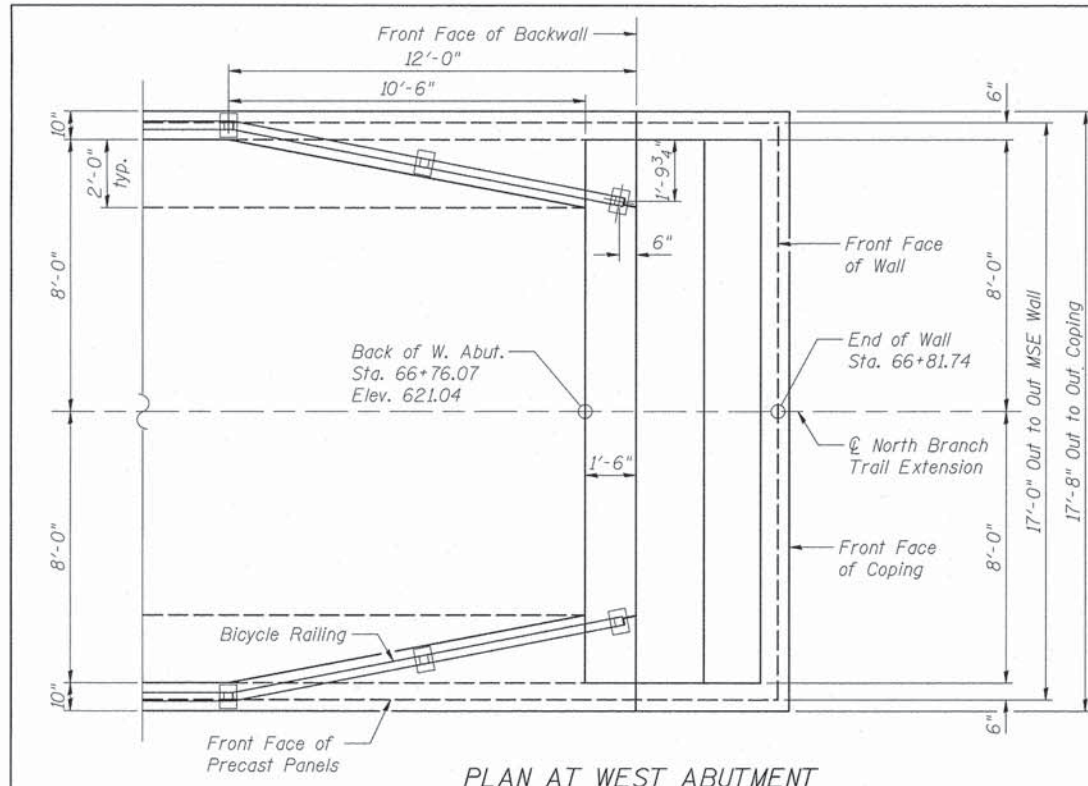


**LOCATION SKETCH**

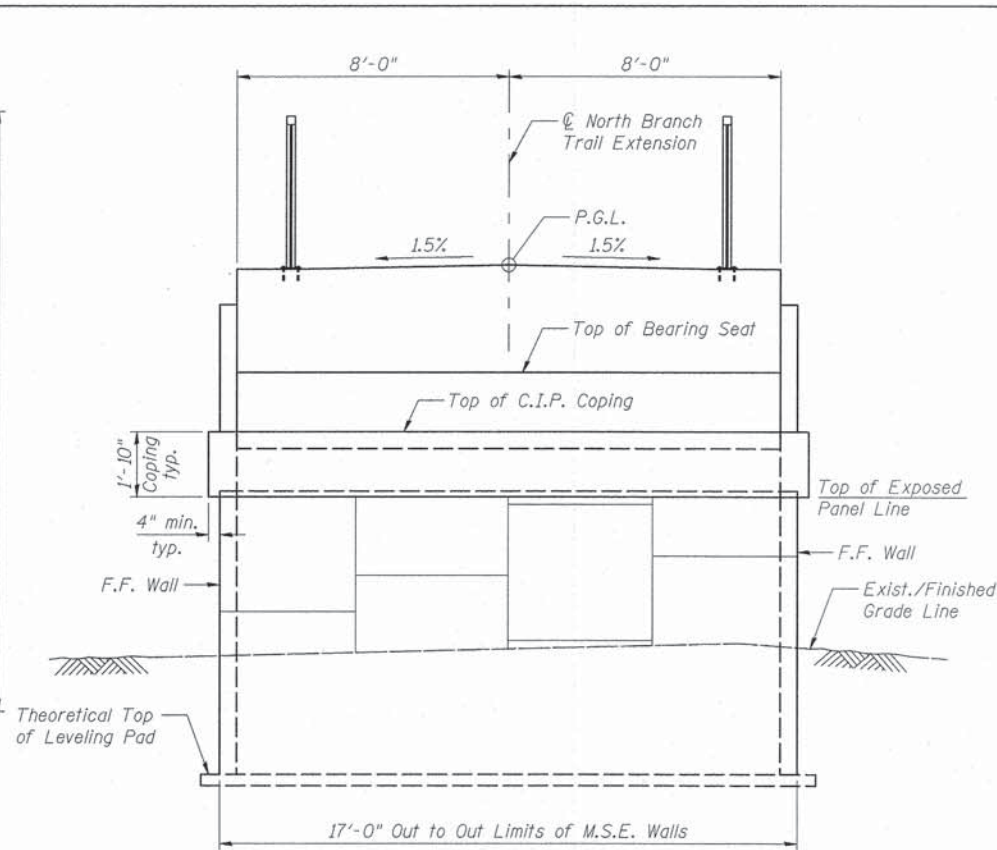
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**GENERAL PLAN AND ELEVATION  
NORTH BRANCH TRAIL EXTENSION  
MSE WALL  
SECTION 08-F3000-21-BT  
COOK COUNTY  
STATION 65+34.99 TO 66+81.74**

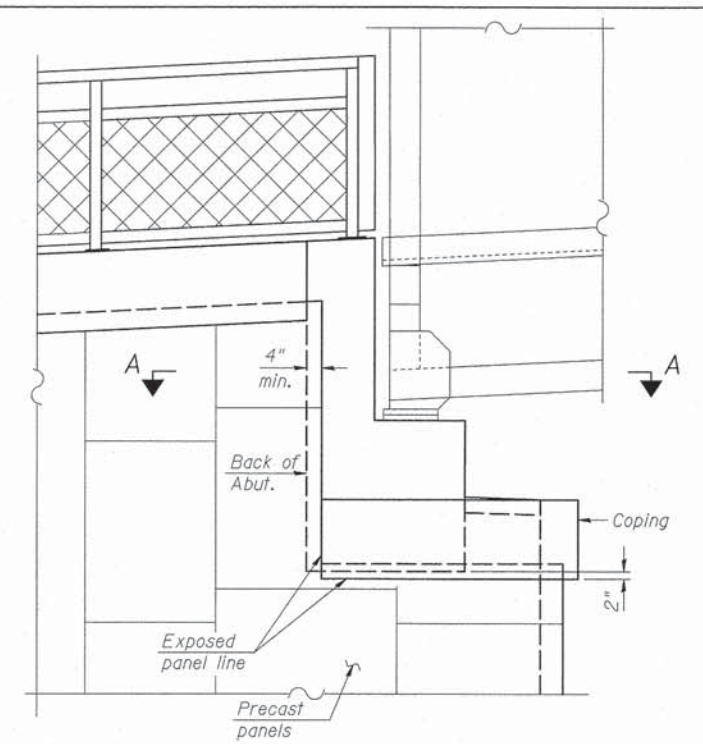
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	PLOT DATE =	DRAWN - BARAC	REVISED			CONTRACT NO. 61A86				
		CHECKED - MBRT	REVISED			ILLINOIS FED. AID PROJECT				



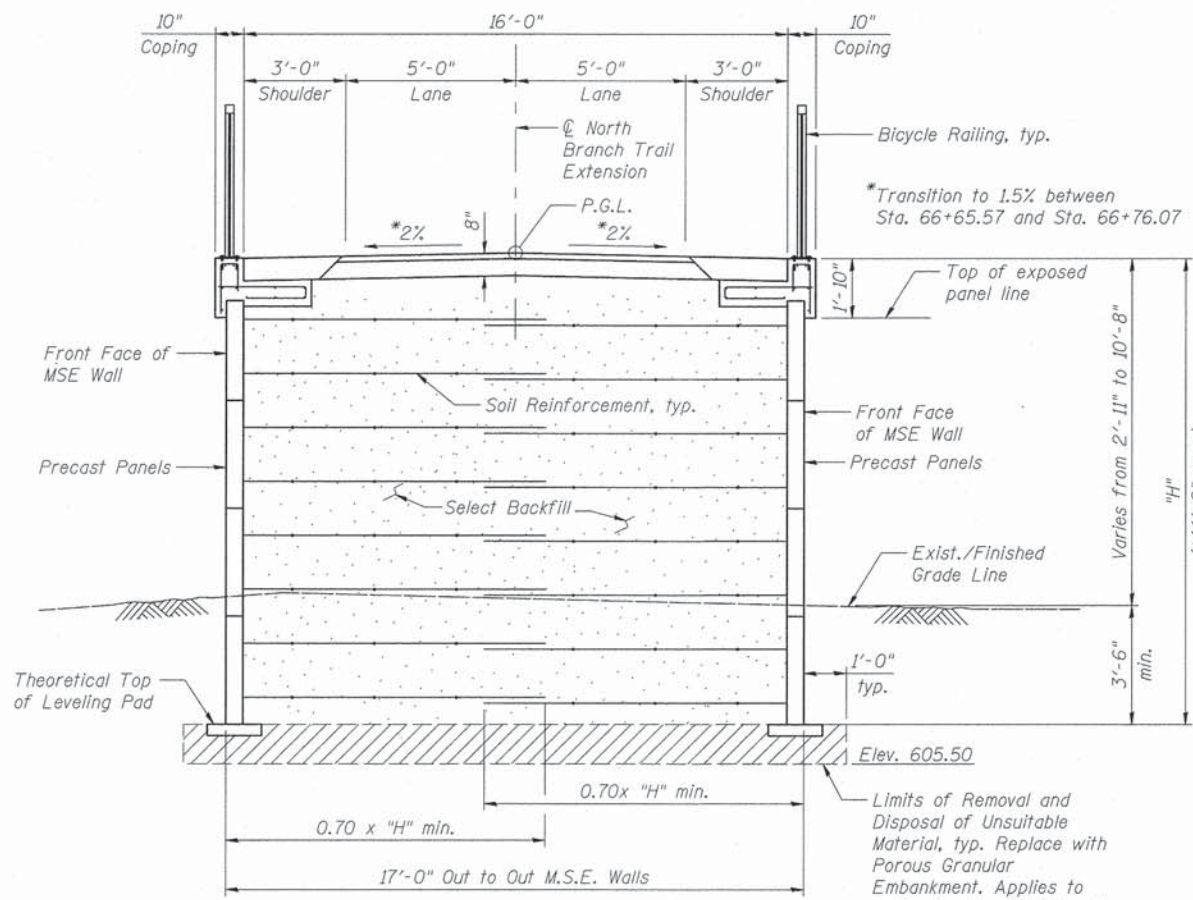
PLAN AT WEST ABUTMENT



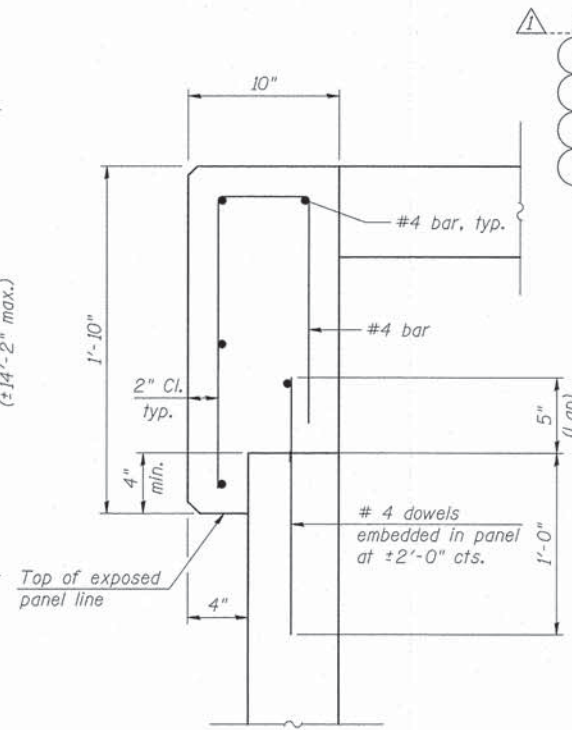
WEST ABUTMENT ELEVATION  
(Showing M.S.E. Wall Details)



WEST ABUTMENT END VIEW  
Looking North  
Pile not shown for clarity

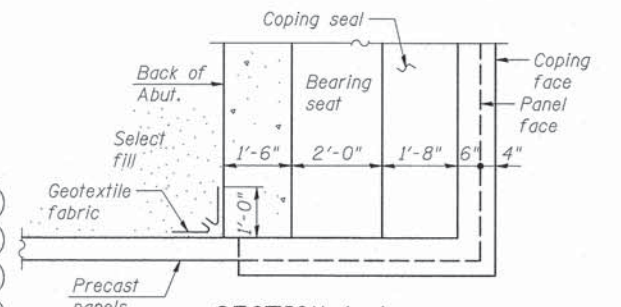


SECTION THRU M.S.E. WALL

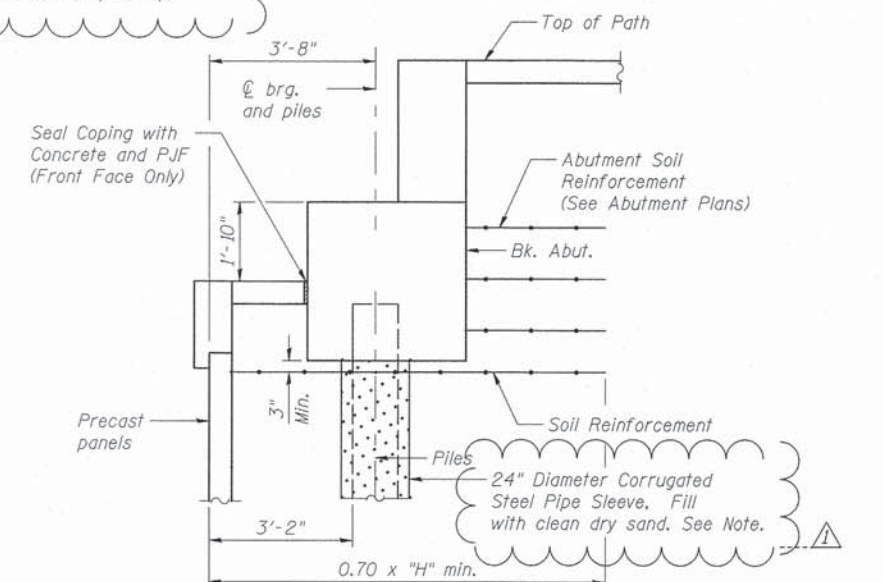


COPING DETAIL AT ABUTMENTS

**PIPE SLEEVE NOTE:**  
Corrugated galvanized steel pipe, 10 gage minimum, shall extend from 1'-0" below the top of leveling pad to the bottom of the concrete pile cap.

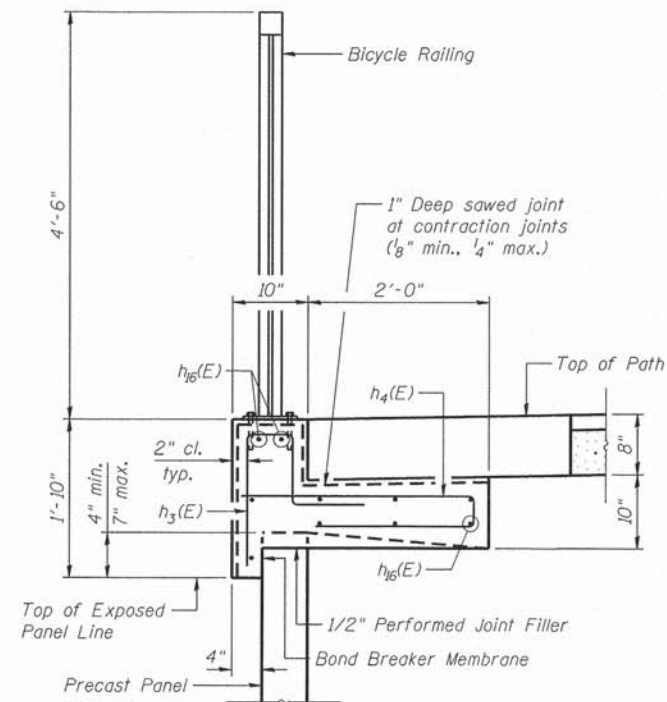


SECTION A-A

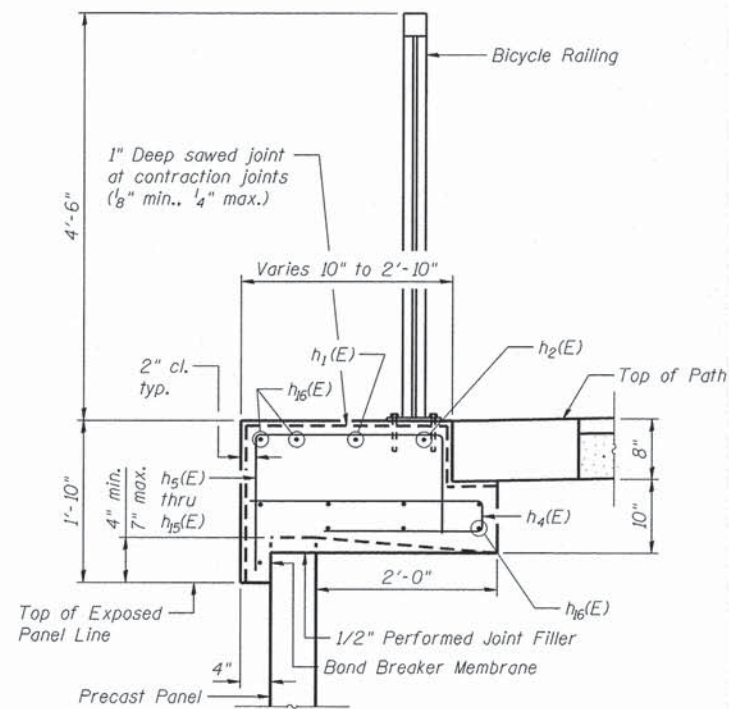


SECTION THRU ABUTMENT

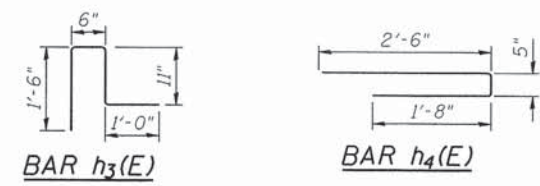
FILE NO. <b>URS</b> 100 SOUTH WACKER DRIVE, Suite 500 CHICAGO, IL 60606 (312) 939-1000	USER NAME =	DESIGNED - BAR	REVISED - 02/10/2015	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH TRAIL EXTENSION</b> <b>MSE WALL DETAILS</b>	F.A.M. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - MBO	REVISED			08-F3000-21-BT	COOK	129	60	
	PLOT DATE =	DRAWN - BAR	REVISED			CONTRACT NO. 61A86				
		CHECKED - MBO	REVISED			ILLINOIS FED. AID PROJECT				
SHEET NO. 2 OF 3 SHEETS										



SECTION A-A



SECTION B-B



BARS h5(E) thru h15(E)

A Dimensions

Bar	A
h5(E)	6"
h6(E)	8"
h7(E)	11"
h8(E)	1'-1"
h9(E)	1'-4"
h10(E)	1'-6"
h11(E)	1'-8"
h12(E)	1'-11"
h13(E)	2'-1"
h14(E)	2'-3"
h15(E)	2'-6"

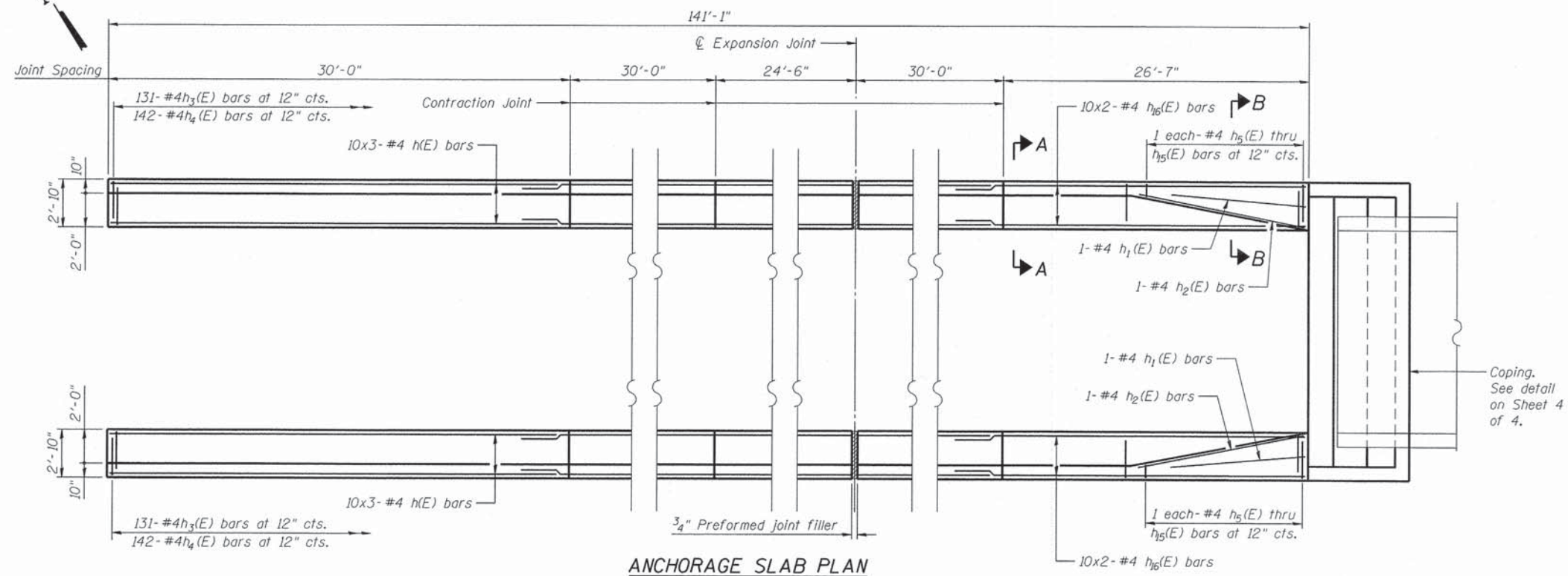
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	60	#4	30'-0"	—
h1(E)	2	#4	8'-0"	—
h2(E)	2	#4	10'-0"	—
h3(E)	262	#4	3'-11"	U
h4(E)	284	#4	4'-7"	—
h5(E)	2	#4	3'-2"	—
h6(E)	2	#4	3'-4"	—
h7(E)	2	#4	3'-7"	—
h8(E)	2	#4	3'-9"	—
h9(E)	2	#4	4'-0"	—
h10(E)	2	#4	4'-2"	—
h11(E)	2	#4	4'-4"	—
h12(E)	2	#4	4'-7"	—
h13(E)	2	#4	4'-9"	—
h14(E)	2	#4	4'-11"	—
h15(E)	2	#4	5'-2"	—
h16(E)	40	#4	29'-7"	—
Concrete Structures			Cu. Yd.	31.0
Reinforcement Bars, Epoxy Coated			Pound	3,640

Note: Bars indicated thus 10x5 - #4 etc. indicates 10 lines of bars with 5 lengths per line.

**MINIMUM BAR LAP**

#4 Bar = 2'-11"



ANCHORAGE SLAB PLAN



USER NAME =	DESIGNED - BARAC	REVISED
PLOT SCALE =	CHECKED - MB@RT	REVISED
PLOT DATE =	DRAWN - BARAC	REVISED
	CHECKED - MB@RT	REVISED

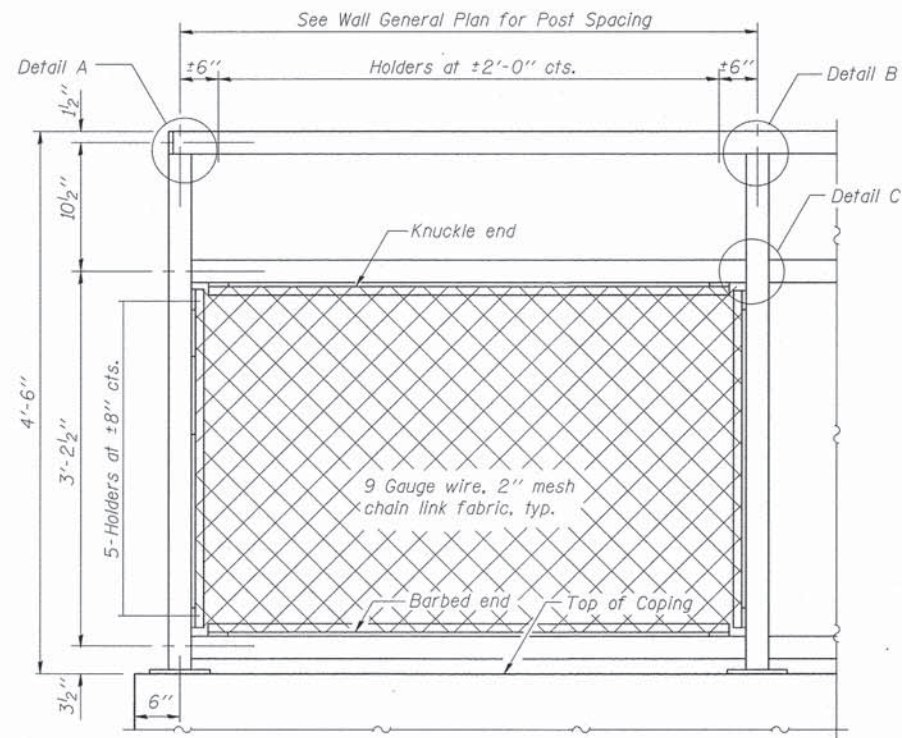
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH TRAIL EXTENSION  
ANCHORAGE SLAB DETAILS

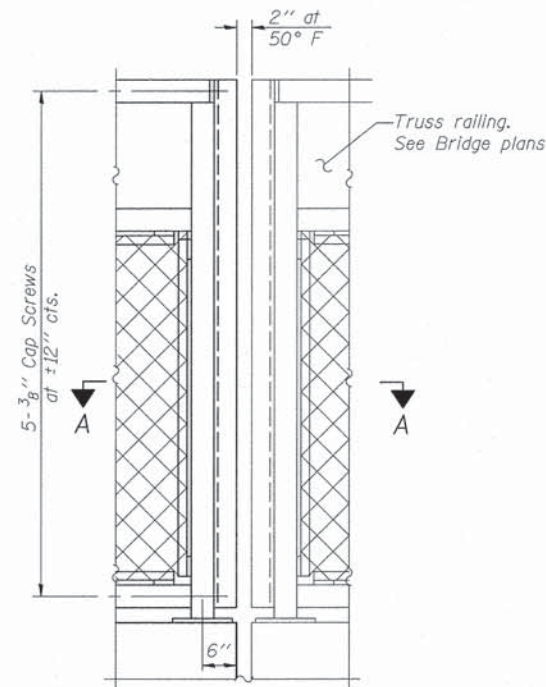
SHEET NO. 3 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	61
CONTRACT NO. 61A86				
[ILLINOIS] FED. AID PROJECT				

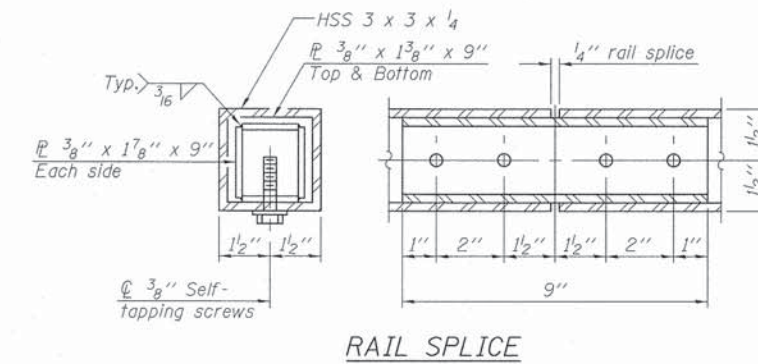
Note:  
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



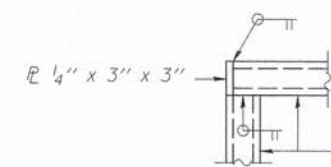
BICYCLE RAILING



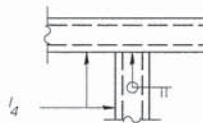
BICYCLE RAILING



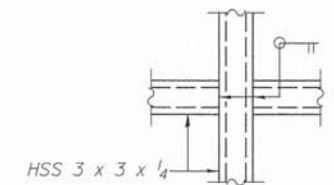
RAIL SPLICE



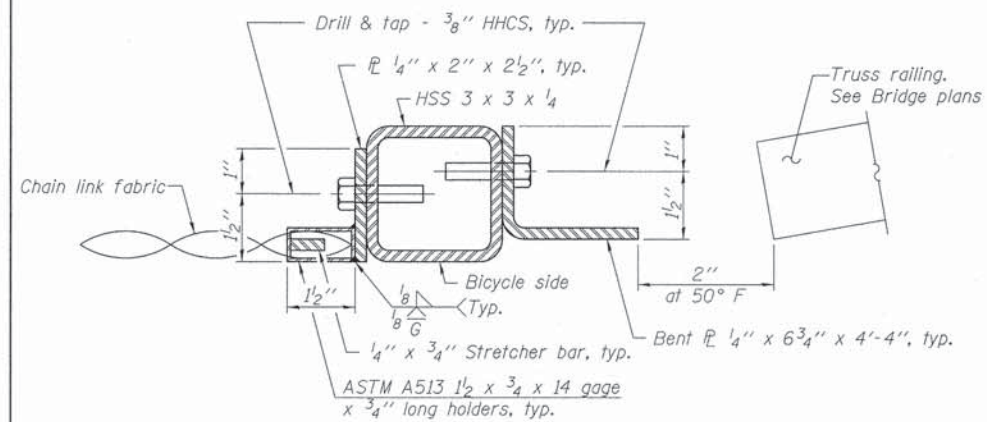
DETAIL A



DETAIL B

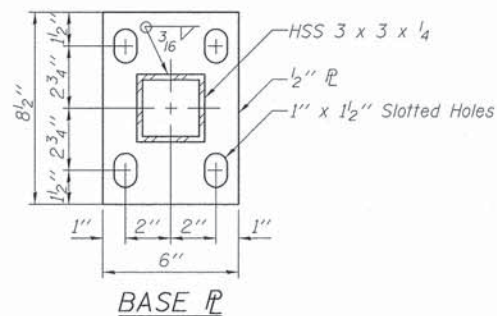


DETAIL C

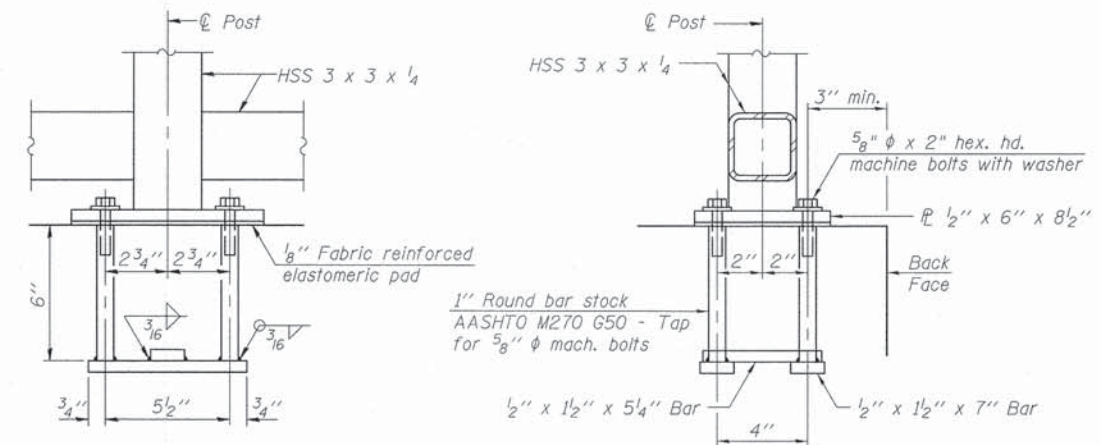


SECTION A-A

Section at Bridge Joint shown, section at Anchorage Slab expansion joint similar



BASE PL



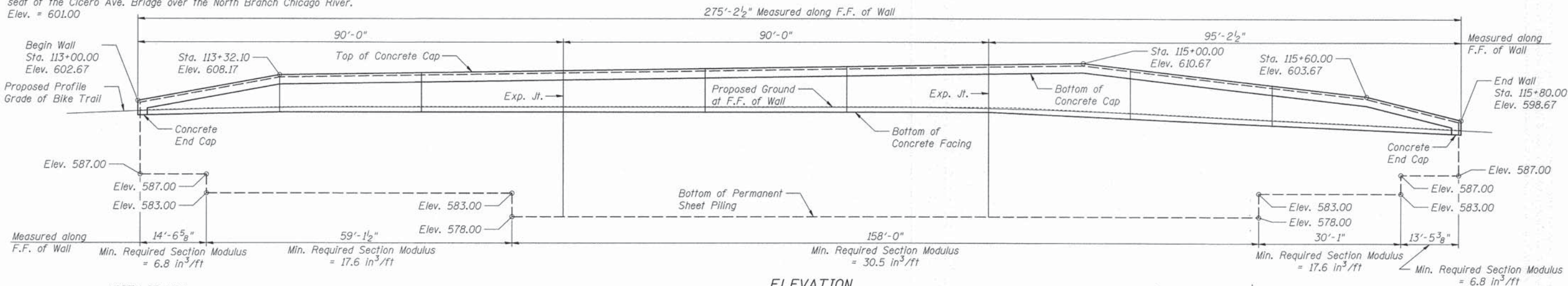
ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

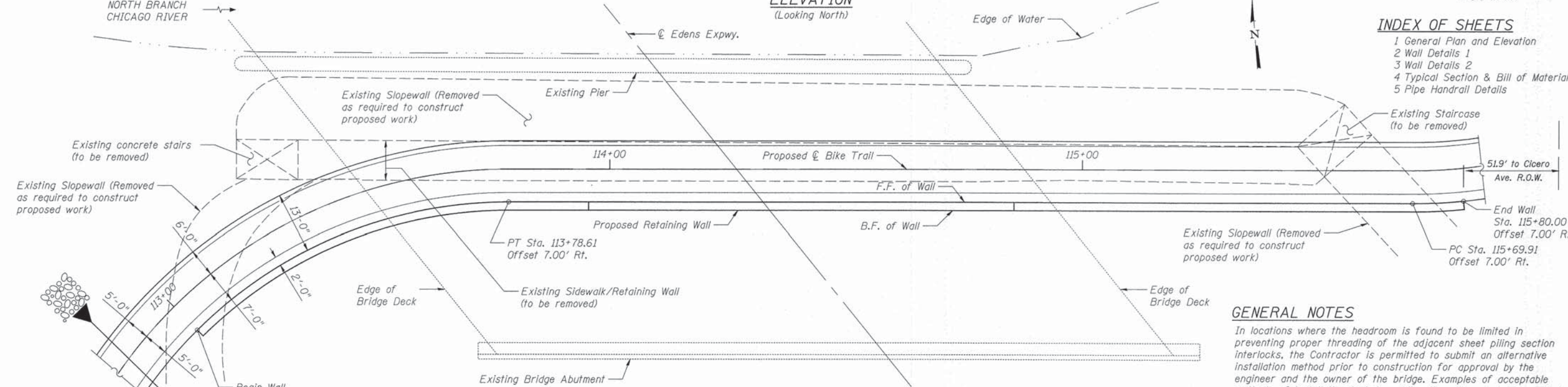
Item	Unit	Quantity
Bicycle Railing	Foot	284

Benchmark: BM #104 - Cut square at the west end of the South Abutment seat of the Cicero Ave. Bridge over the North Branch Chicago River. Elev. = 601.00



**INDEX OF SHEETS**

- 1 General Plan and Elevation
- 2 Wall Details 1
- 3 Wall Details 2
- 4 Typical Section & Bill of Material
- 5 Pipe Handrail Details



**GENERAL NOTES**

In locations where the headroom is found to be limited in preventing proper threading of the adjacent sheet piling section interlocks, the Contractor is permitted to submit an alternative installation method prior to construction for approval by the engineer and the owner of the bridge. Examples of acceptable methods of installation include welding the piling, installing multiple sheets bolted together, or special driving equipment. The cost of the work required to implement and conduct the approved method is included with the bid item "Permanent Steel Sheet Piling".

Permanent steel pile walls shall be backfilled prior to constructing the concrete facing.

Hard driving in hardpan clay may be encountered below elevation 590.00. The Contractor shall provide the appropriate driving equipment for such.

For Curve data, see sheets 2 & 3.

0.00 Chicago City Datum = 579.88 USGS

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Backfill	Cu. Yd.	173.0
Concrete Removal	Cu. Yd.	131.3
Slope Wall Removal	Sq. Yd.	237
Structure Excavation	Cu. Yd.	528.0
Concrete Structures	Cu. Yd.	93.7
Stud Shear Connectors	Each	1,426
Reinforcement Bars, Epoxy Coated	Pound	7,940
Pipe Handrail	Foot	270
Slope Wall 4 Inch	Sq. Yd.	271
Geocomposite Wall Drain	Sq. Yd.	199
Concrete Gutter, Type B	Foot	243
Permanent Steel Sheet Piling	Sq. Ft.	7,398
Pipe Underdrains for Structures 4"	Foot	291
Chain Link Fence to be Removed and Re-Erected	Foot	230

**DESIGN SPECIFICATIONS**

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

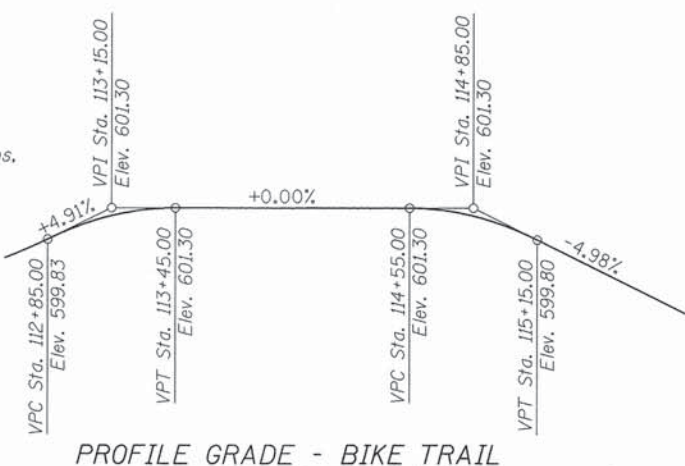
**DESIGN STRESSES**

FIELD UNITS

f'<sub>c</sub> = 3,500 P.S.I.

F<sub>y</sub> = 60,000 P.S.I. (Reinf.)

F<sub>y</sub> = 50,000 P.S.I. (Permanent Sheet Piling)

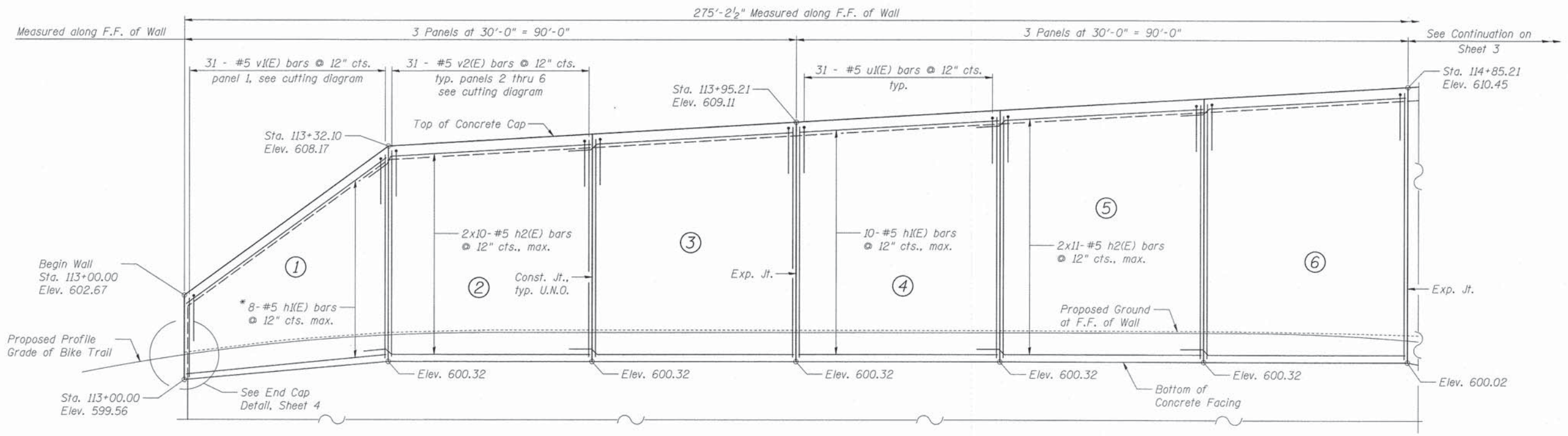


**PLAN**

STATE OF ILLINOIS  
MICHAEL B. QUIRIN  
LICENSED STRUCTURAL ENGINEER  
STATE OF ILLINOIS 081-6070  
EXPIRES 11/30/2014

12/12/14

I certify that to the best of knowledge, information and belief, this 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.



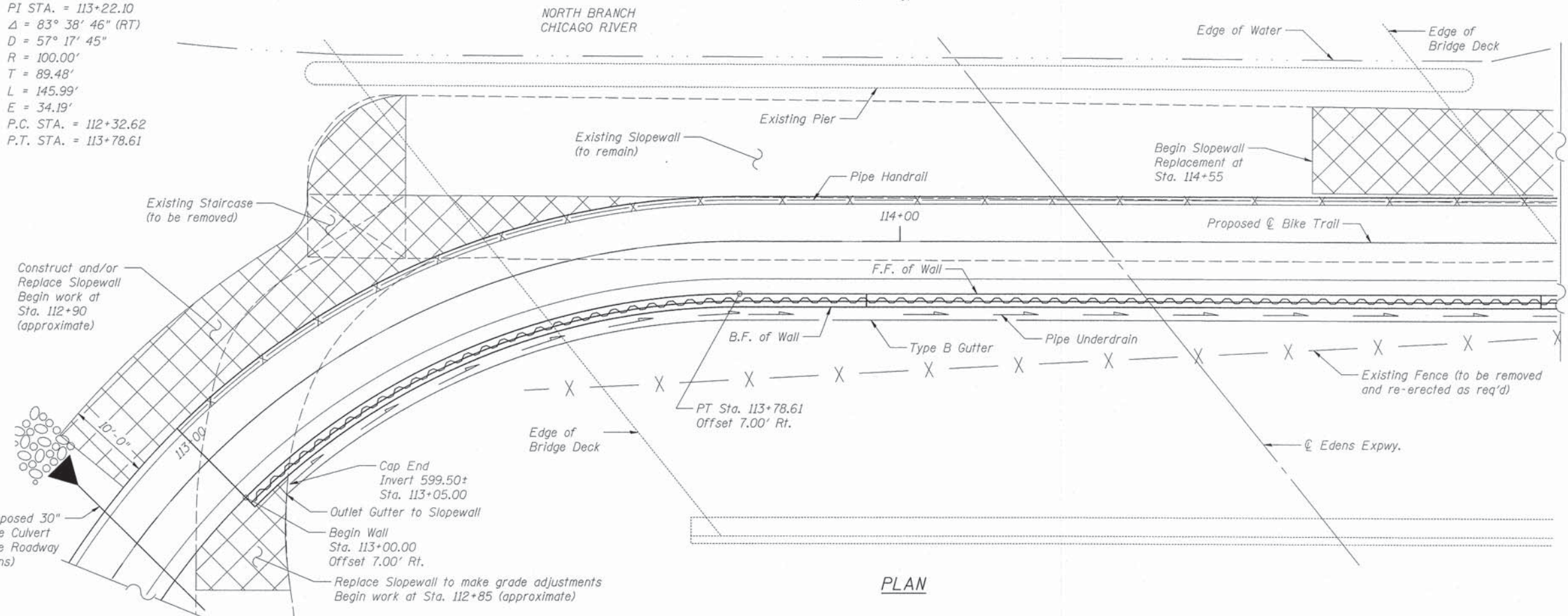
**ELEVATION**  
(Looking North)

Note: h(E) thru h3(E) bars at back face of cap not shown, see Typical Wall Section

**CURVE DATA**

PI STA. = 113+22.10  
 $\Delta = 83^\circ 38' 46''$  (RT)  
 $D = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 89.48'$   
 $L = 145.99'$   
 $E = 34.19'$   
P.C. STA. = 112+32.62  
P.T. STA. = 113+78.61

\* Cut, bend and/or flare bars to fit in field. Maintain minimum clearances and maximum spacings as required.





**PLAN**

**NOTES**

For Slope Wall details, Bar Bend Details, Cutting Diagrams, and Bill of Material, see Sheet 4.  
For Typical Section thru wall, see Sheet 3.  
For Construction Joint Detail and Expansion Joint Detail, see Sheet 4.  
Bars indicated thus 5x3 etc. indicates 5 lines of bars with 3 bars per line.

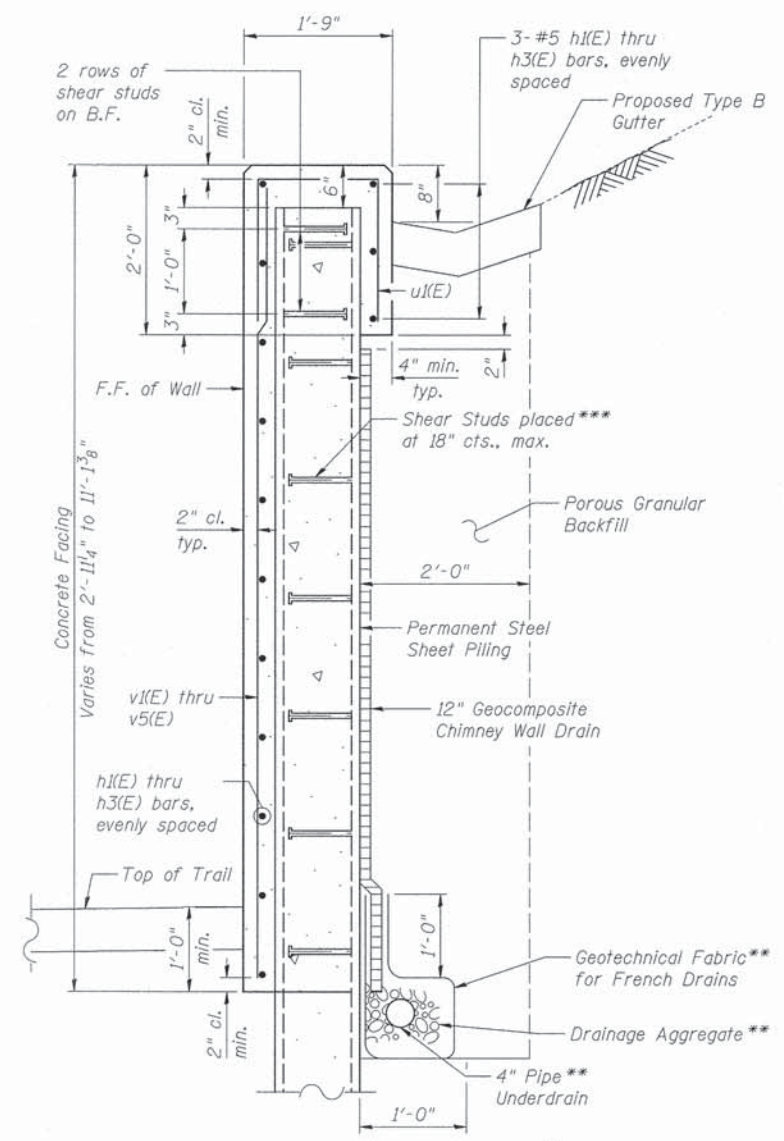
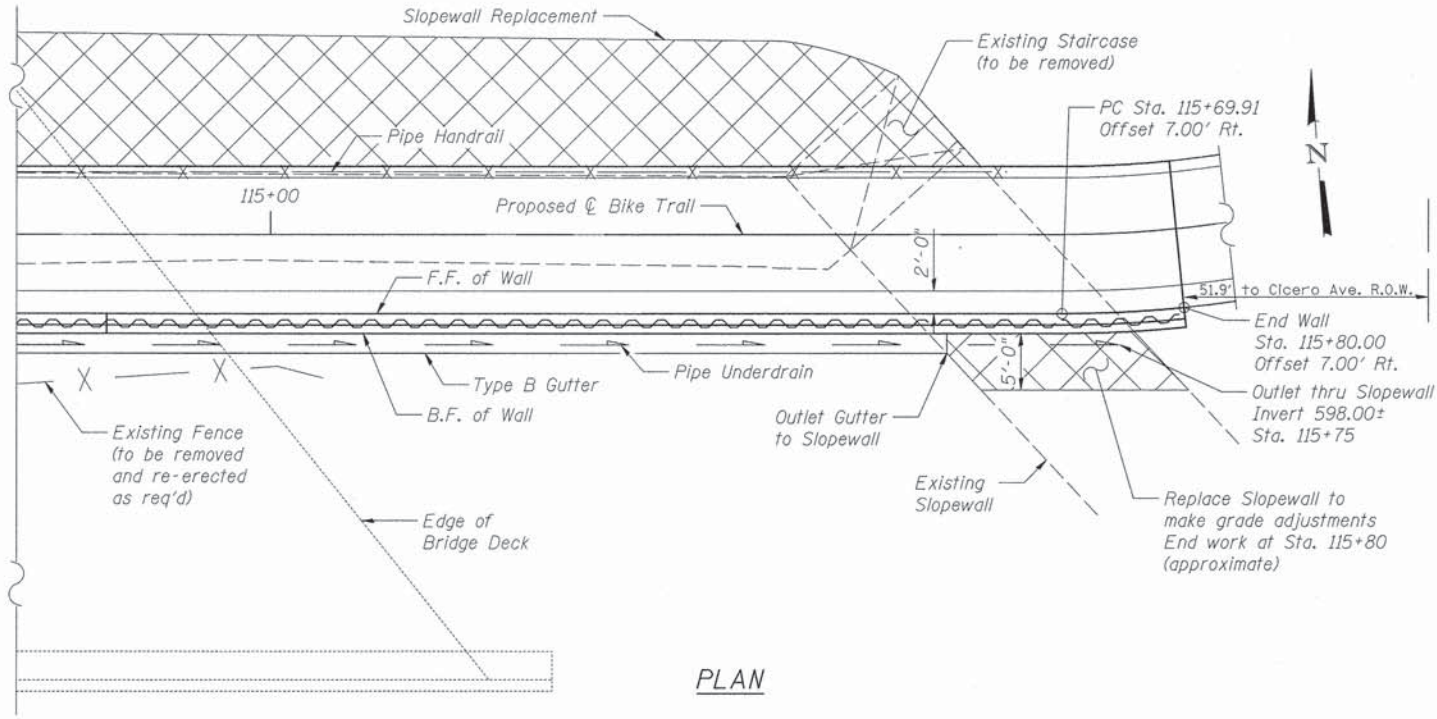
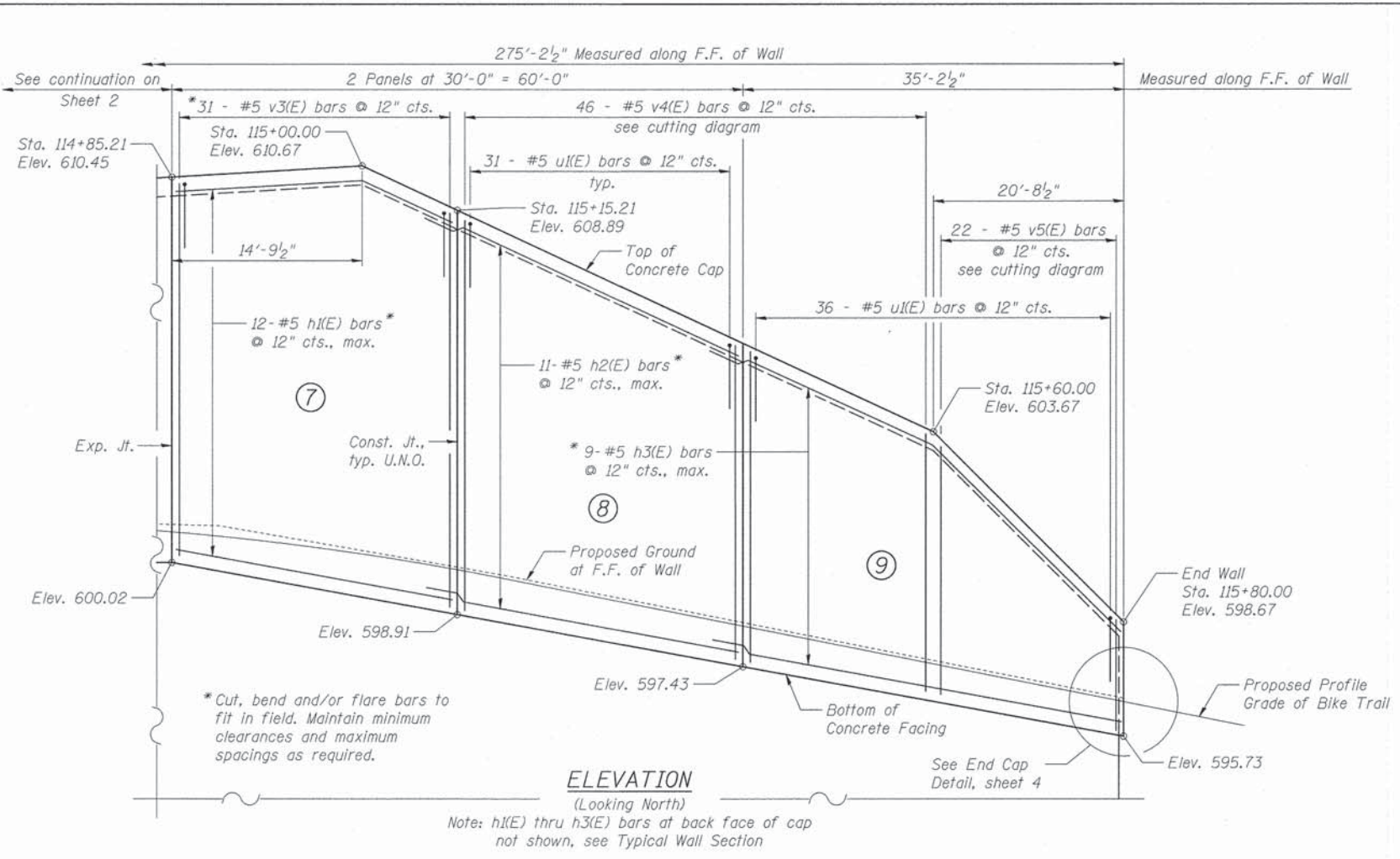
**MINIMUM BAR LAP**  
#5 Bar = 2'-11"

**LEGEND**

-  Proposed Slopewall
-  Panel No.

	USER NAME =	DESIGNED - PSK 5-16-14	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH TRAIL EXTENSION</b> <b>WALL DETAILS 1</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - MBO 5-29-14	REVISED			08-F3000-21-BT	COOK	129	64	
	PLOT DATE =	DRAWN - PSK 5-16-14	REVISED			CONTRACT NO. 61A86				
		CHECKED - MBO 5-29-14	REVISED			ILLINOIS FED. AID PROJECT				
						SHEET NO. 2 OF 5 SHEETS				





**LEGEND**

- Proposed Sloped Wall
- Panel No.

**MINIMUM BAR LAP**  
#5 Bar = 2'-11"

**CURVE DATA**

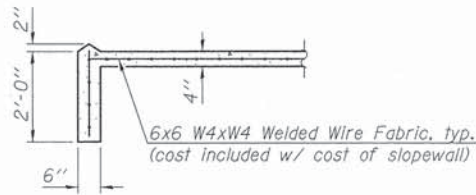
PI STA. = 115+97.71  
 $\Delta = 31^\circ 04' 13"$  (LT)  
 $D = 57^\circ 17' 45"$   
 $R = 100.00'$   
 $T = 27.80'$   
 $L = 54.23'$   
 $E = 3.79'$   
 P.C. STA. = 115+69.91  
 P.T. STA. = 116+24.14

**NOTES**

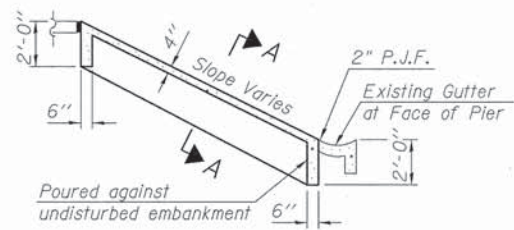
For Slope Wall details, Bar Bend Details, Cutting Diagrams and Bill of Material, see Sheet 4.

For Construction Joint Detail and Expansion Joint Detail, see Sheet 4.

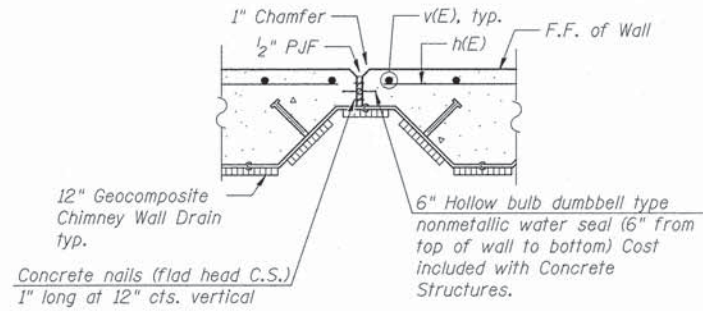
12" geocomposite chimney wall drain is paid for as Geocomposite Wall Drain and shall be placed as single vertical strips on the flats and the slopes of the sheeting and secured with double-sided tape or construction adhesive as recommended by the manufacturer and approved by the Engineer.



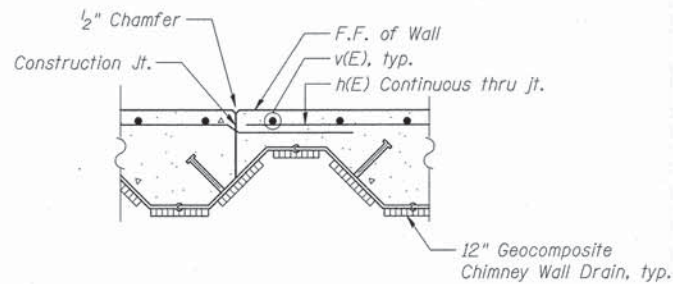
SECTION A-A



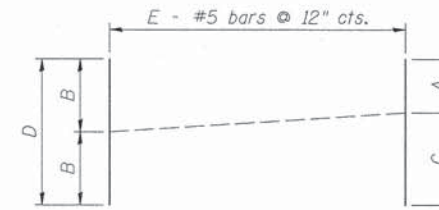
SECTION THRU CONCRETE SLOPEWALL



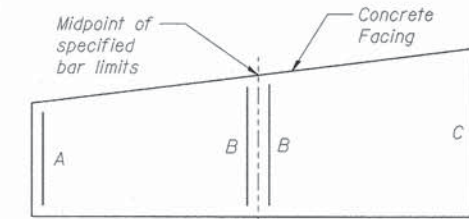
EXPANSION JOINT DETAIL



CONSTRUCTION JOINT DETAIL



v1(E), v2(E), v4(E) & v5(E)



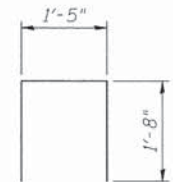
VERTICAL REINFORCEMENT LAYOUT

A THRU E DIMENSIONS

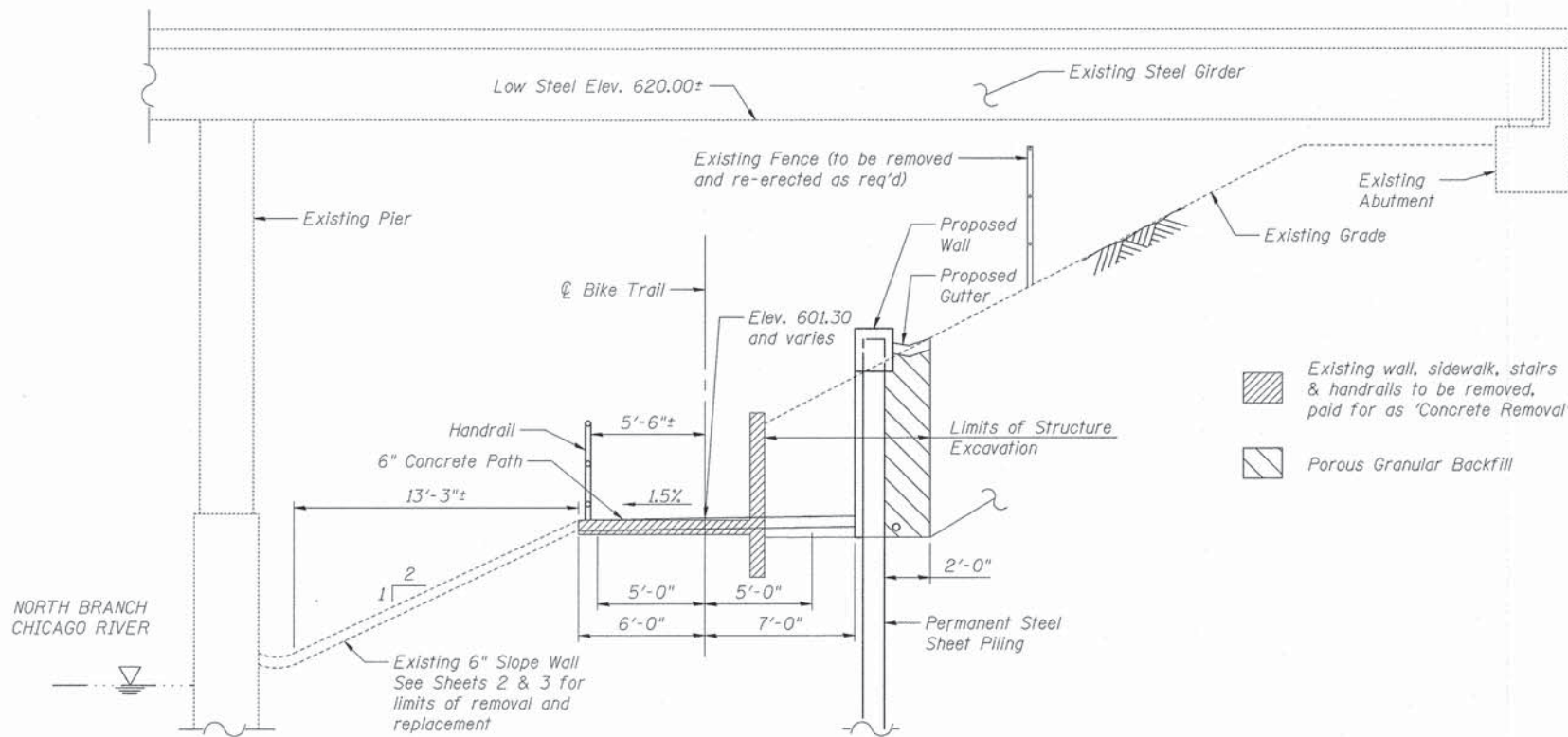
Bar	A	B	C	D	E
v1(E)	2'-9"	5'-2"	7'-6"	10'-3"	16
v2(E)	7'-6"	8'-8"	9'-10"	17'-4"	78
v4(E)	6'-6"	8'-1"	9'-8"	16'-2"	23
v5(E)	2'-7"	4'-6"	6'-6"	9'-1"	11

BILL OF MATERIAL

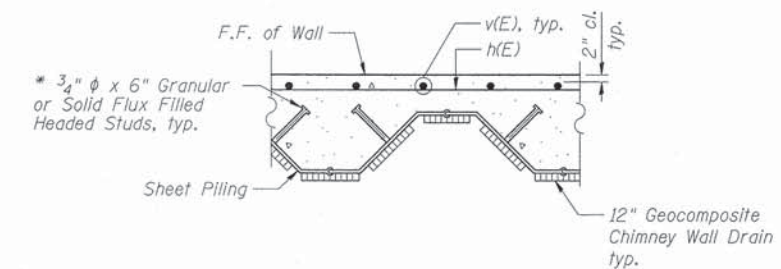
Bar	No.	Size	Length	Shape
h1(E)	39	#5	30'-2"	—
h2(E)	68	#5	33'-1"	—
h3(E)	12	#5	39'-6"	—
v1(E)	16	#5	10'-3"	—
v2(E)	78	#5	17'-4"	—
v3(E)	31	#5	10'-10"	—
v4(E)	23	#5	16'-2"	—
v5(E)	11	#5	9'-1"	—
u1(E)	292	#5	4'-9"	□
Structure Excavation			Cu. Yd.	528.0
Concrete Structures			Cu. Yd.	93.7
Stud Shear Connectors			Each	1,426
Reinforcement Bars, Epoxy Coated			Pound	7,940
Permanent Steel Sheet Piling			Sq. Ft.	7,398



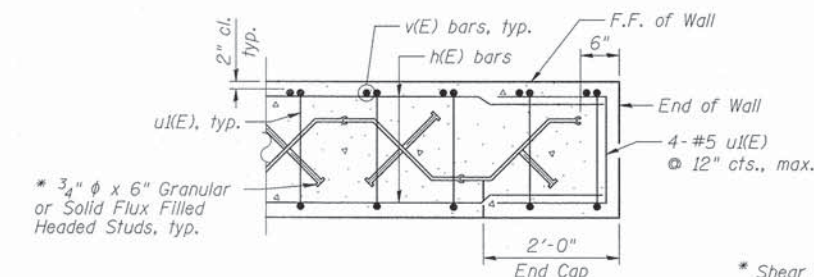
BAR u1(E)



TYPICAL SECTION



SECTION THRU WALL



SECTION THRU CAP

(East end shown, West end similar)

\* Shear Studs shall be 3/4" dia. x 6" granular or solid flux filled headed Studs automatically end welded in the field to Sheet Piling.



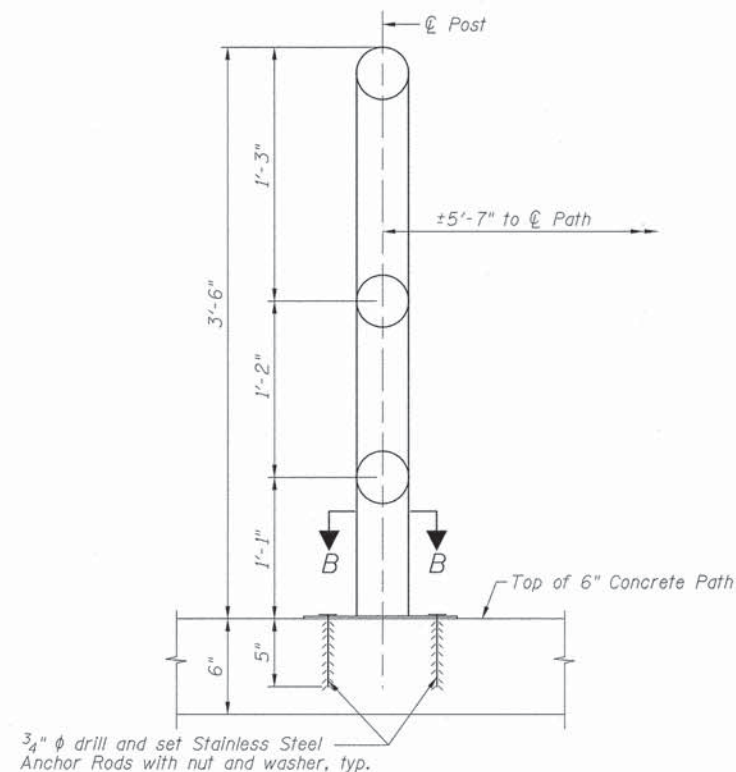
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PLOT SCALE =	CHECKED - MBO 5-29-14	REVISED
PLOT DATE =	DRAWN - PSK 5-22-14	REVISED
	CHECKED - MBO 5-29-14	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

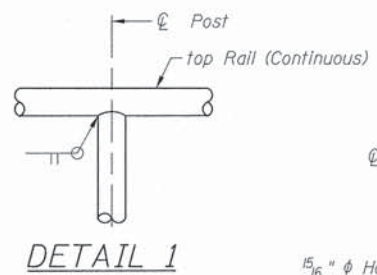
NORTH BRANCH TRAIL EXTENSION  
TYPICAL SECTION & BILL OF MATERIAL

SHEET NO. 4 OF 5 SHEETS

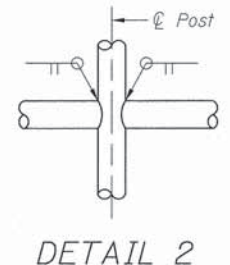
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	66
CONTRACT NO. 61A86			ILLINOIS FED. AID PROJECT	



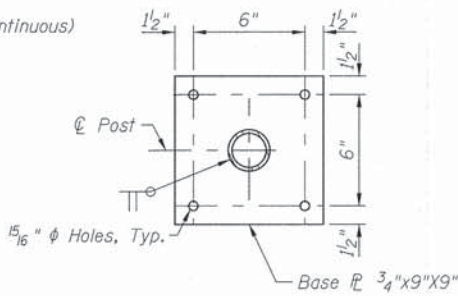
DETAIL - SIDEWALK MOUNTED RAIL POST



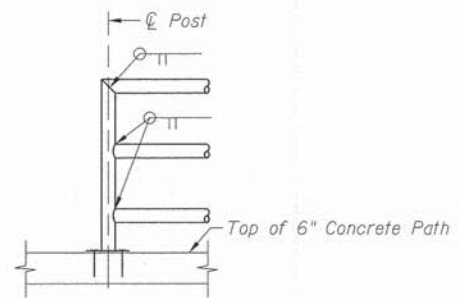
DETAIL 1



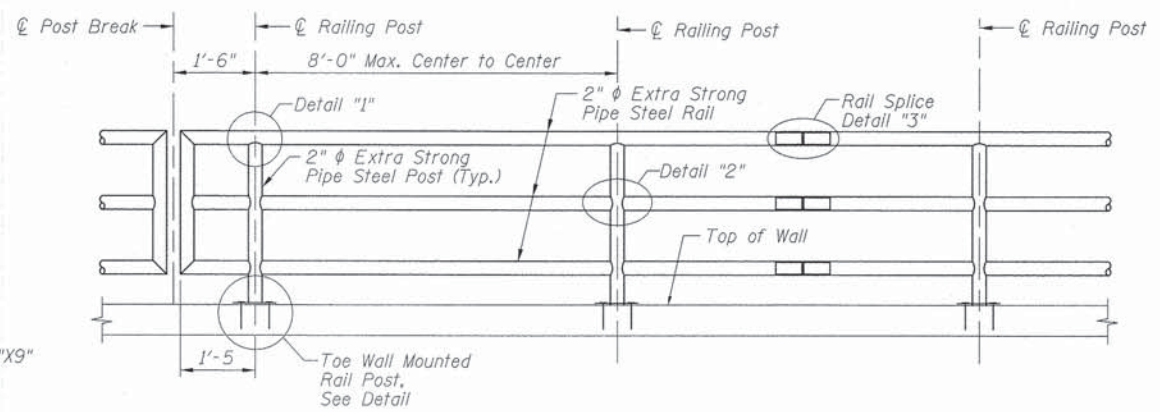
DETAIL 2



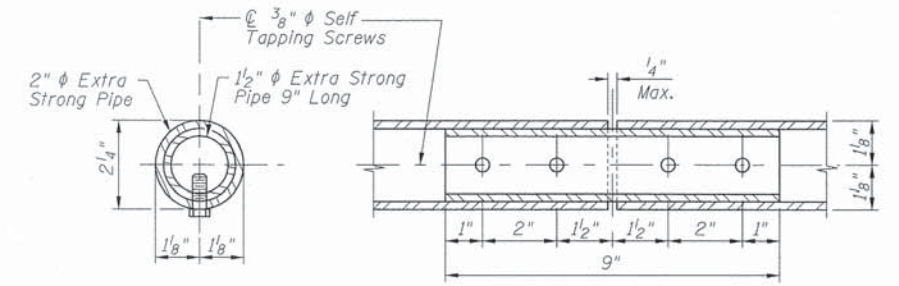
SECTION B-B



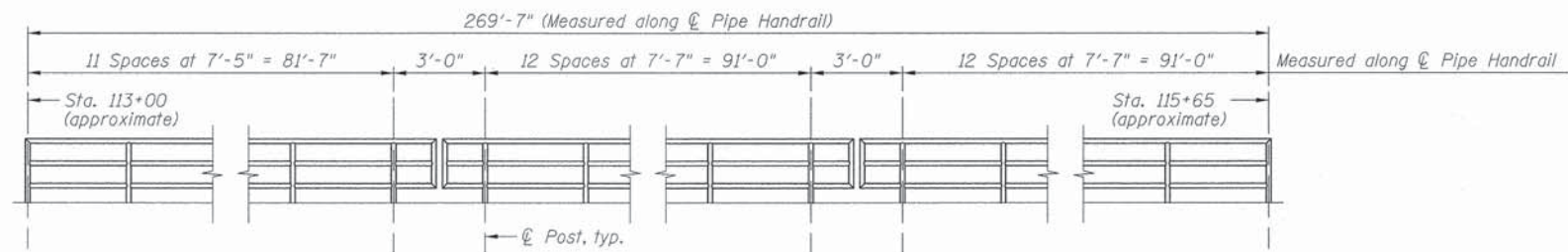
ELEVATION SHOWING END POST



TYPICAL PIPE HANDRAIL ELEVATION



DETAIL 3 - RAIL SPLICE



POST SPACING LAYOUT  
Looking North

**NOTES:**

1. Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot.
2. Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, Structural Steel Tubing.
3. All other steel shapes and plates shall conform to the requirements of AASHTO M-270M, Grade 345.
4. All posts, railing, splices, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M-111 and ASTM A-385. All bolts, nuts and washers shall be galvanized according to AASHTO M-232 except stainless steel bolts as noted.
5. Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.
6. Rail to match horizontal profile of bikepath.

<b>URS</b> 200 SOUTH WACKER DRIVE, SUITE 200 CHICAGO, IL 60606 (312) 937-1000	USER NAME =	DESIGNED - PSK 5-22-14	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH TRAIL EXTENSION</b> <b>PIPE HANDRAIL DETAILS</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - MBQ 5-29-14	REVISED			08-F3000-21-BT	COOK	129	67	
	PLOT DATE =	DRAWN - PSK 5-22-14	REVISED			CONTRACT NO. 61A86				
		CHECKED - MBQ 5-29-14	REVISED			ILLINOIS FED. AID PROJECT				
SHEET NO. 5 OF 5 SHEETS										

Benchmark: BM #104 - Cut square at the west end of the South Abutment seat of the Cicero Ave. Bridge over the North Branch Chicago River. Elev. = 601.00

**TOTAL BILL OF MATERIAL**

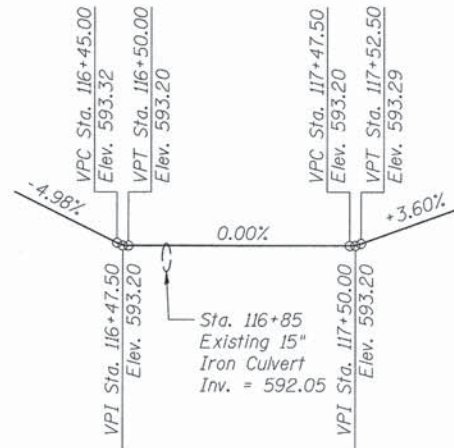
ITEM	UNIT	Wall "A"	Wall "B"	TOTAL
Porous Granular Backfill	Cu. Yd.	-	-	192.3
Filter Fabric	Sq. Yd.	-	-	299
Concrete Removal	Cu. Yd.	6.0	-	6.0
Structure Excavation	Cu. Yd.	105.3	-	105.3
Cofferdam (Type 1) (Location - 2)	Each	-	-	1
Concrete Structures	Cu. Yd.	52.7	3.5	56.2
Stud Shear Connectors	Each	-	48	48
Reinforcement Bars, Epoxy Coated	Pound	5,760	360	6,120
Pipe Handrail	Foot	80	22	102
Slope Wall 4 Inch	Sq. Yd.	-	-	87
Storm Sewer Removal 15"	Foot	20	-	20
Controlled Low-Strength Material	Cu. Yd.	30.8	-	30.8
Remove and Replace Stone Riprap	Cu. Yd.	-	-	285.1
Downspout Adjustment	Each	-	-	2
Permanent Steel Sheet Piling	Sq. Ft.	-	477	477
Storm Sewer (Water Main Requirements) 15 Inch	Foot	20	-	20

**CURVE DATA**

PI STA. = 116+46.56  
 $\Delta = 25^\circ 16' 23" (RT)$   
 $D = 57^\circ 17' 45"$   
 $R = 100.00'$   
 $T = 22.42'$   
 $L = 44.11'$   
 $E = 2.48'$   
 P.C. STA. = 116+24.14  
 P.T. STA. = 116+68.25

**CURVE DATA**

PI STA. = 117+49.04  
 $\Delta = 41^\circ 29' 27" (RT)$   
 $D = 57^\circ 17' 45"$   
 $R = 100.00'$   
 $T = 37.88'$   
 $L = 72.42'$   
 $E = 6.93'$   
 P.C. STA. = 117+11.16  
 P.T. STA. = 117+83.57



**PROFILE GRADE - BIKE TRAIL**

**DESIGN SPECIFICATIONS**

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

**DESIGN STRESSES**

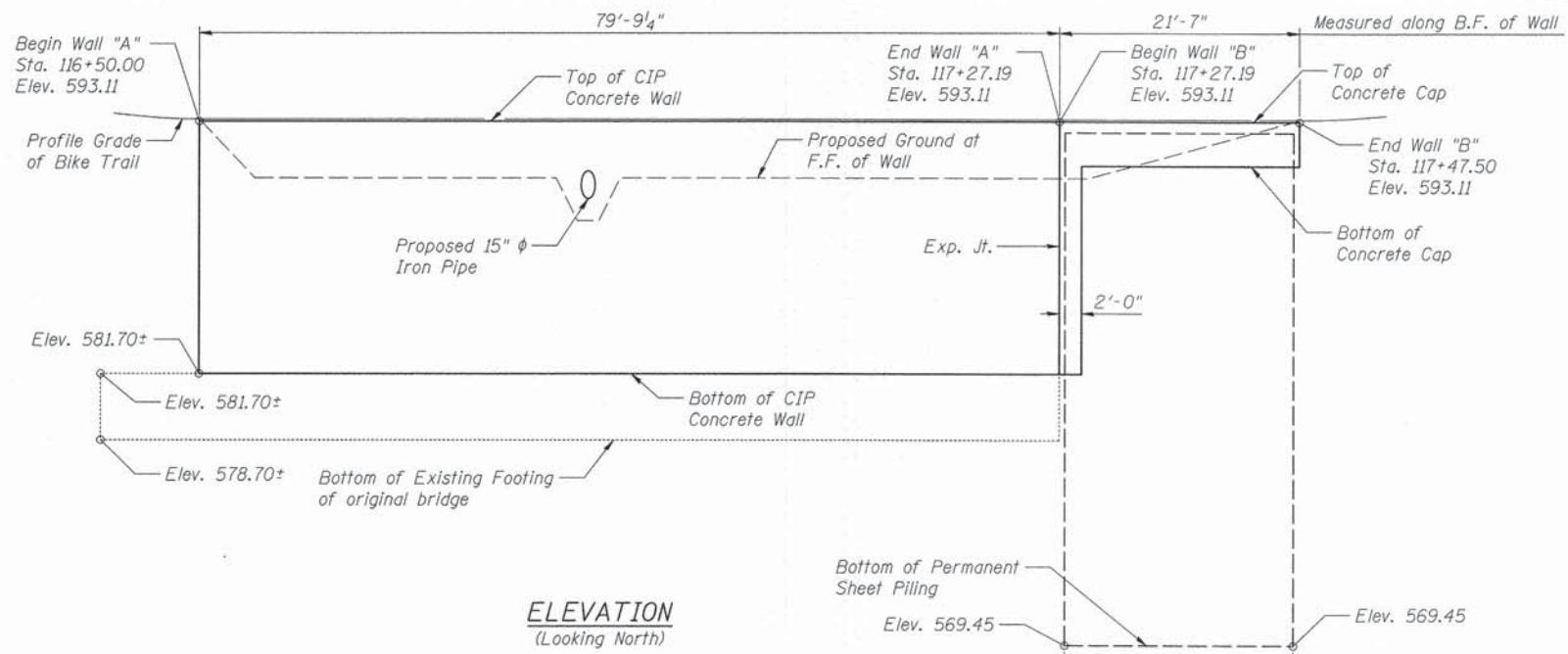
FIELD UNITS  
 $f'_c = 3,500$  P.S.I.  
 $F_y = 60,000$  P.S.I. (Reinf.)  
 $F_y = 50,000$  P.S.I. (Permanent Sheet Piling)

**GENERAL NOTES**

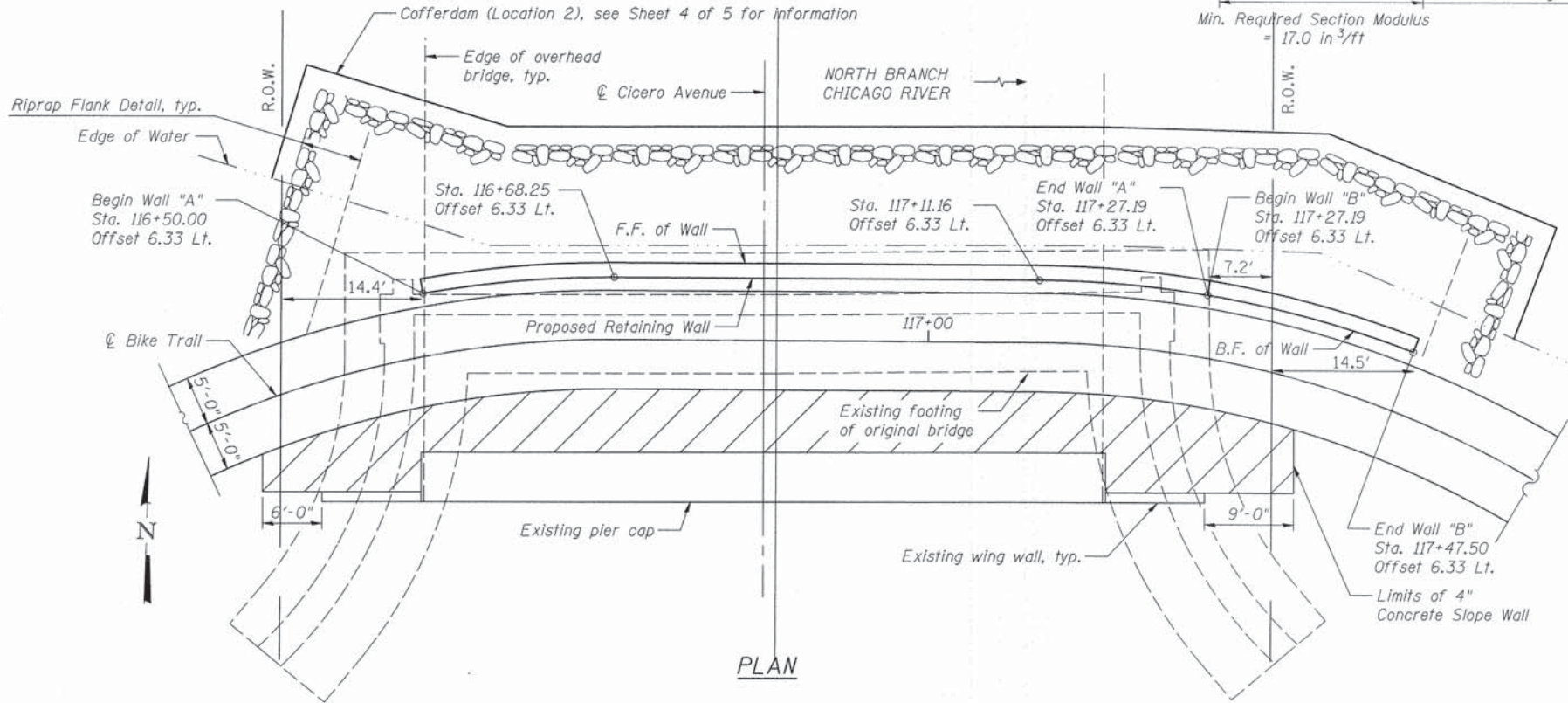
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Soil borings were not performed for this project. Soil boring logs are located in the 2006 plans for Structure No. 016-2782, built under Contract No. 60440.

0.00 Chicago City Datum = 579.88 USGS



**ELEVATION**  
(Looking North)



**PLAN**

**INDEX OF SHEETS**

- 1 General Plan and Elevation
- 2 Wall "A" Details
- 3 Wall "B" Details
- 4 Details and Bill of Material
- 5 Pipe Handrail Details



MICHAEL B. QUIRIN DATE 12/15/14  
 LICENSED STRUCTURAL ENGINEER  
 STATE OF ILLINOIS 081-6070  
 EXPIRES 11/30/2014

I certify that to the best of knowledge, information and belief, this 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.

**GENERAL PLAN AND ELEVATION**  
**NORTH BRANCH TRAIL EXTENSION**  
**CICERO UNDERPASS RETAINING WALL**  
**SEC. 08-F3000-21-BT**  
**COOK COUNTY**  
**STA 116+50.00 TO 117+50.00**



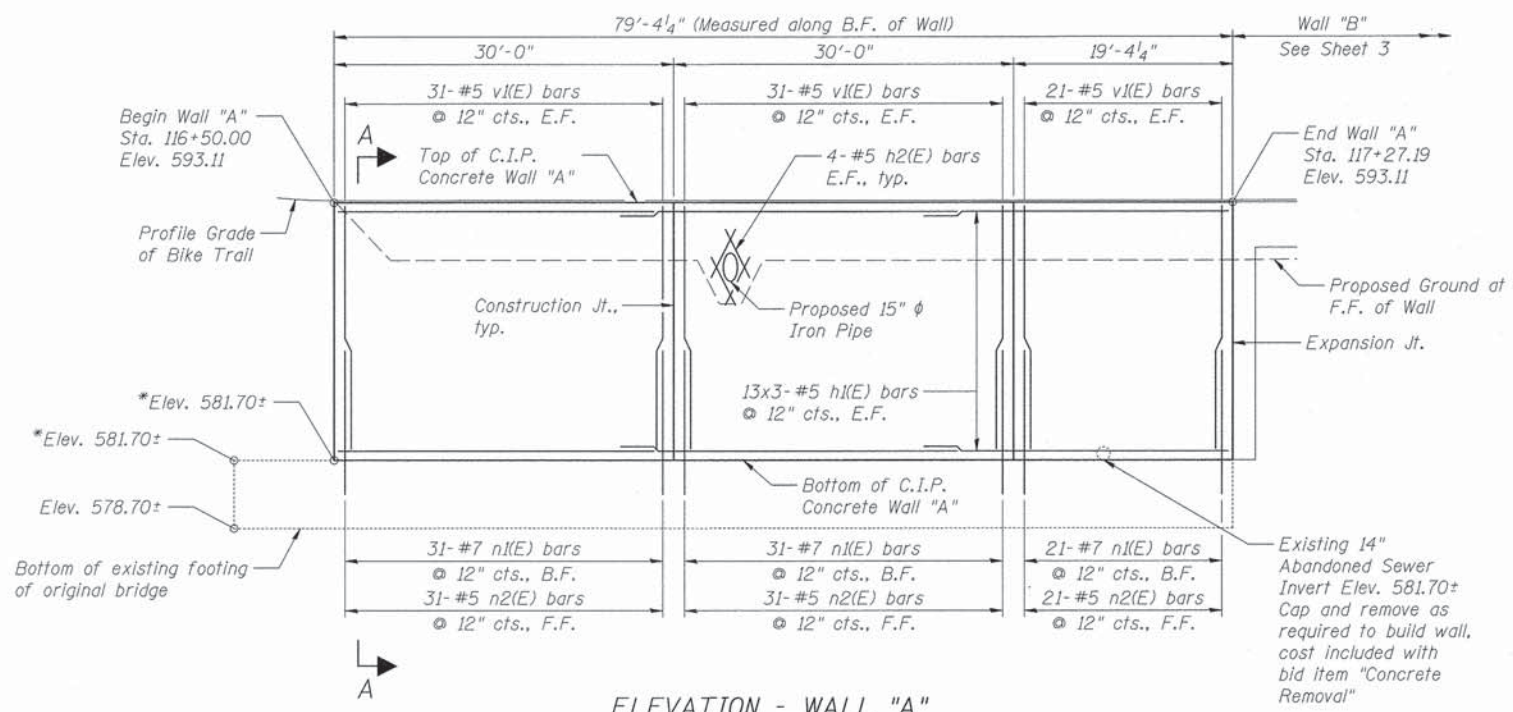
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH TRAIL EXTENSION**

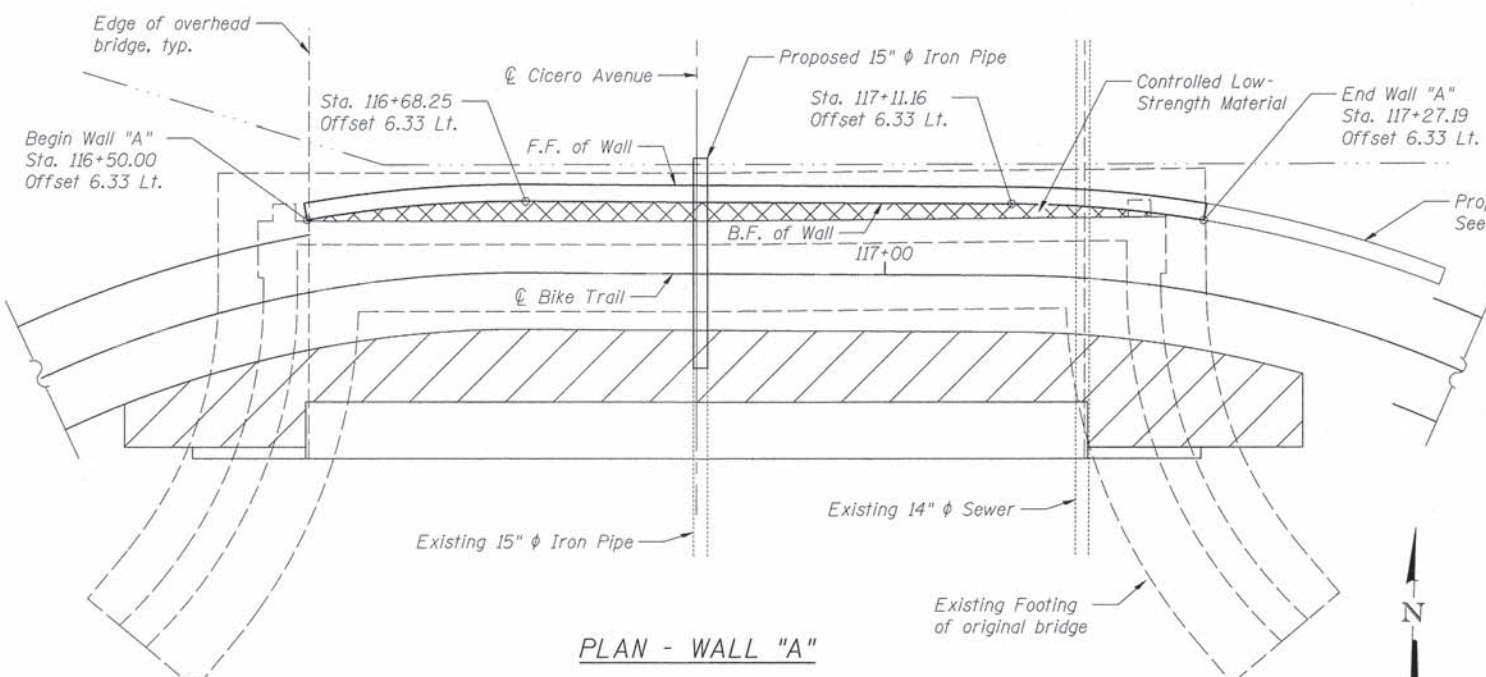
SHEET NO. 1 OF 5 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	68
CONTRACT NO. 61A86				
[ILLINOIS] FED. AID PROJECT				



**ELEVATION - WALL "A"**

(Looking North)  
 Bars indicated thus 5x3 etc. indicates 5 lines of bars with 3 bars per line.

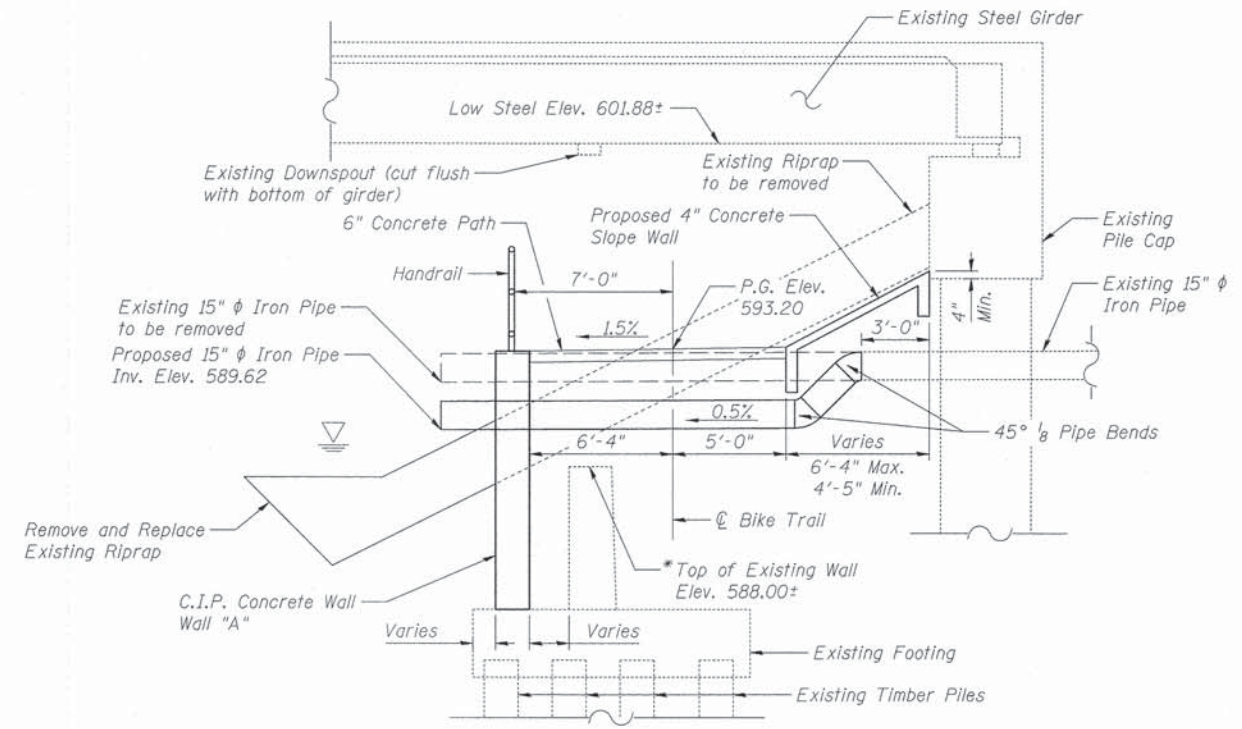


**PLAN - WALL "A"**

**NOTES**  
 For Slope Wall details, Riprap details, Excavation details and Bill of Material, see Sheet 4.

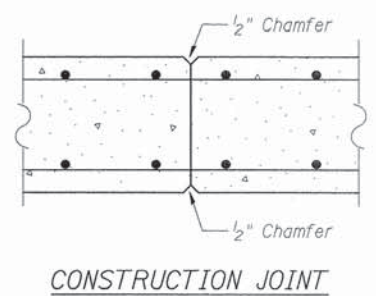
\* Elevations of the existing bridge substructure are based on the 2006 plans for Structure No. 016-2782, Cicero Ave. over North Branch of the Chicago River, Contract No. 60440. These elevations are approximate and are to be verified in the field by the Contractor.

**MINIMUM BAR LAP**  
 #5 Bar = 2'-11"  
 #7 Bar = 4'-2"

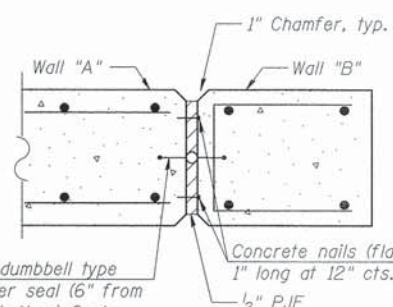


**TYPICAL SECTION THRU WALL "A"**

(Section thru Pile Cap shown, similar detail thru Wing Wall)

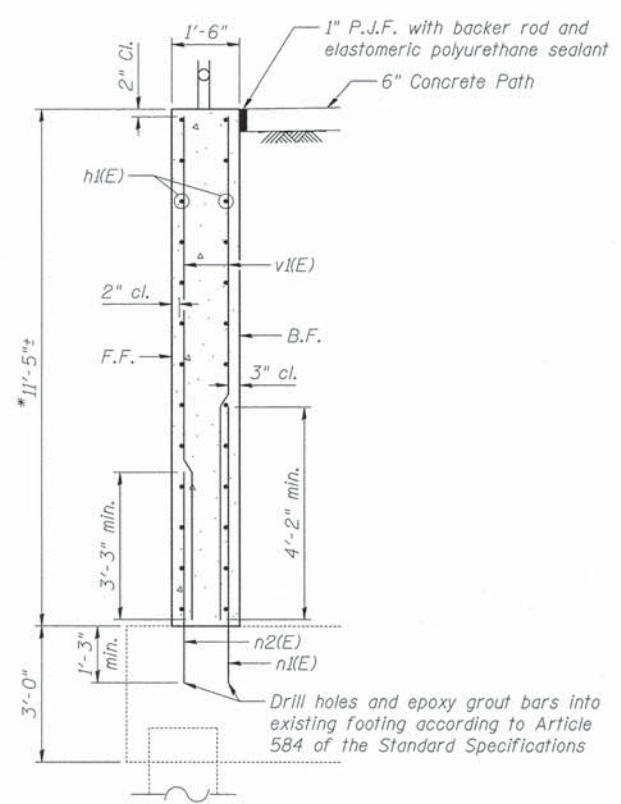


**CONSTRUCTION JOINT**

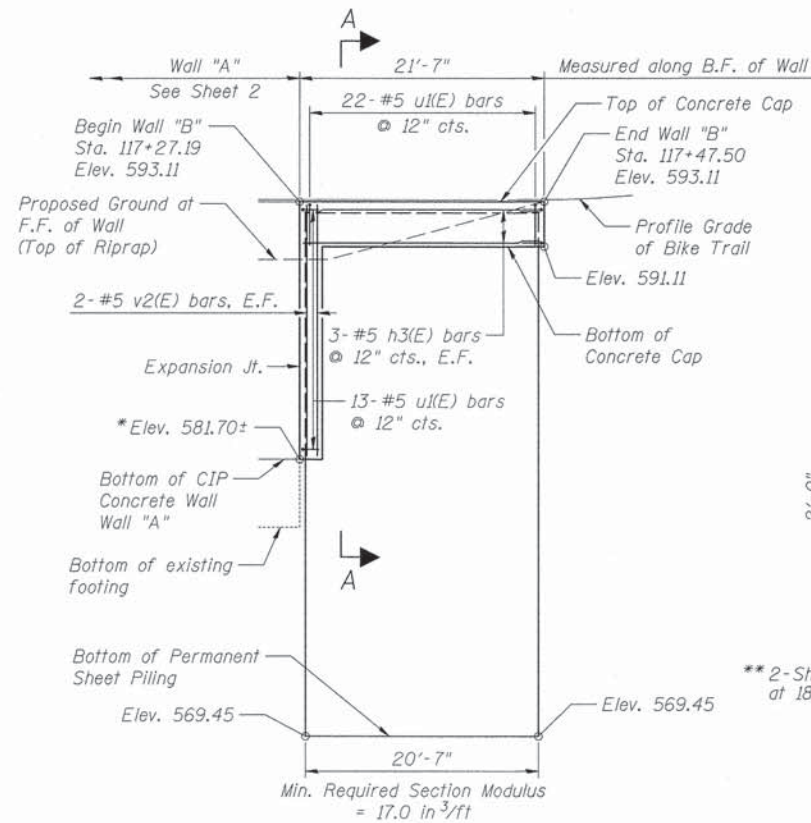


**EXPANSION JOINT**

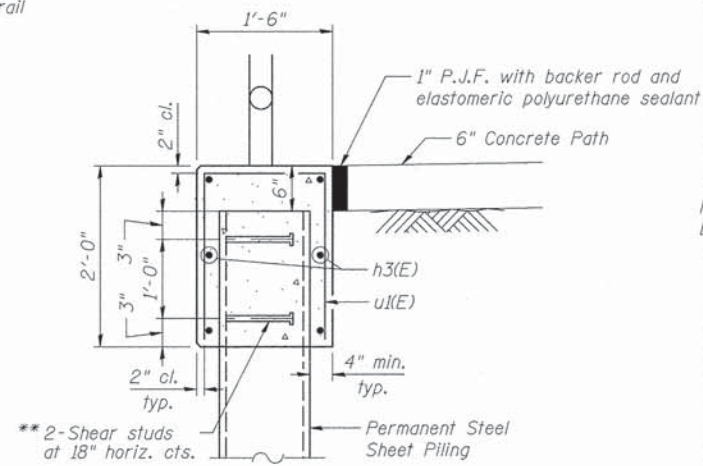
6" Hollow bulb dumbbell type nonmetallic water seal (6" from top of wall to bottom) Cost included with Concrete Structures.



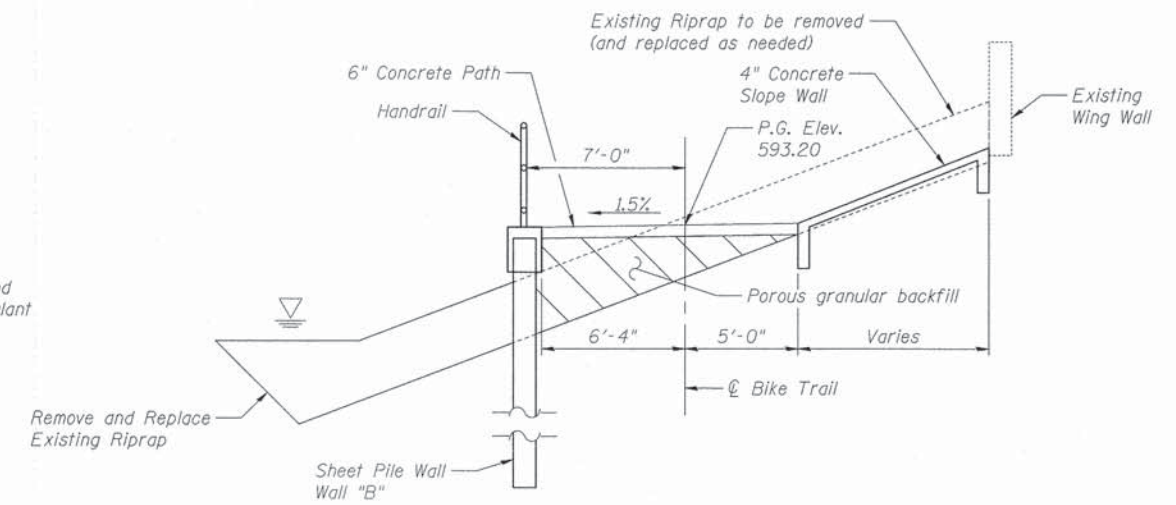
**SECTION A-A**



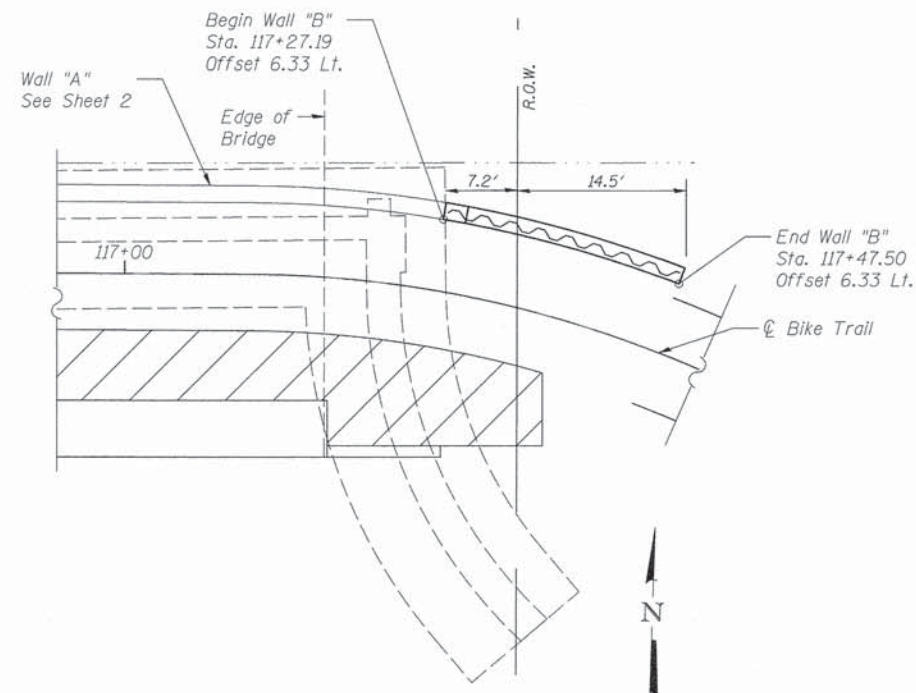
**ELEVATION - WALL "B"**  
(Looking North)



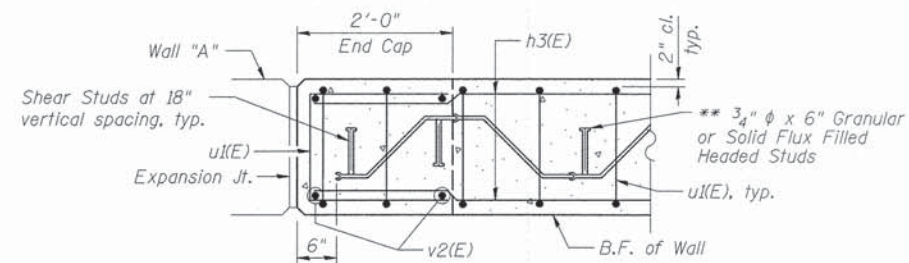
**SECTION A-A**



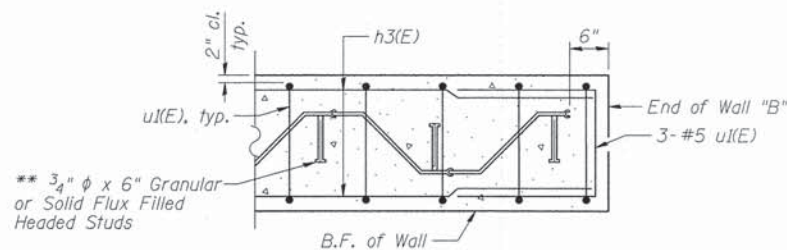
**TYPICAL SECTION THRU WALL "B"**  
(Section thru Wing Wall shown, similar detail past Wing Wall)



**PLAN - WALL "B"**



**CAP DETAIL - WEST END**



**CAP DETAIL - EAST END**

**NOTES**

For Slope Wall details, Riprap details, and Bill of Material, see Sheet 4.

For Construction Joint and Expansion Joint details, see Sheet 2.

\* Elevations of the existing bridge substructure are based on the 2006 plans for Structure No. 016-2782, Cicero Ave. over North Branch of the Chicago River, Contract No. 60440. These elevations are approximate and are to be verified in the field by the Contractor.

\*\* Shear Studs shall be 3/4" dia. x 6" granular or solid flux filled headed Studs automatically end welded in the field to Sheet Piling.



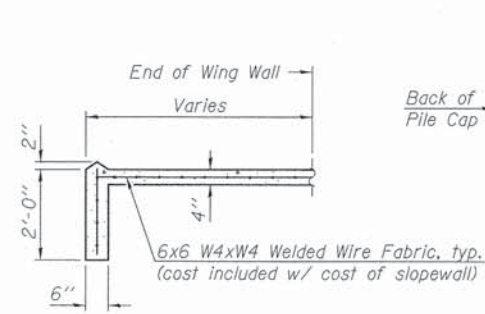
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

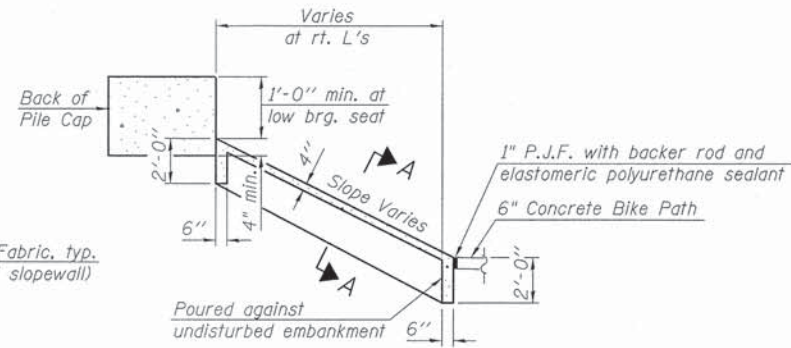
**NORTH BRANCH TRAIL EXTENSION  
WALL "B" DETAILS**

SHEET NO. 3 OF 5 SHEETS

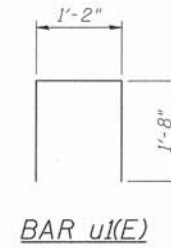
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	08-F3000-21-BT	COOK	129	70
CONTRACT NO. 61A86				
ILLINOIS FED. AID PROJECT				



SECTION A-A



SECTION THRU CONCRETE SLOPEWALL



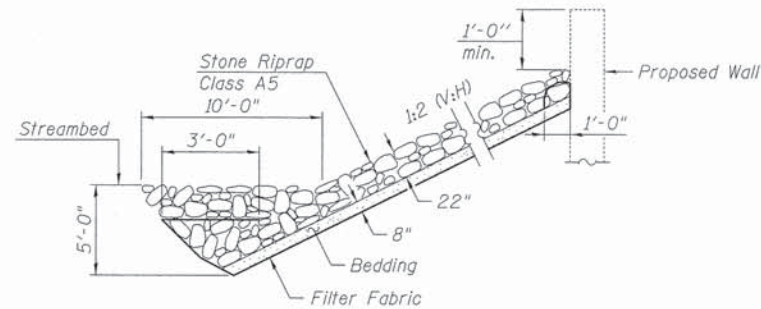
BAR u(E)

BILL OF MATERIAL WALL "A"

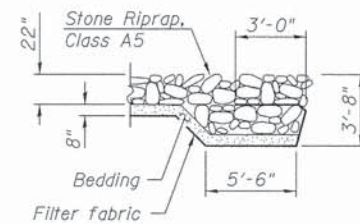
Bar	No.	Size	Length	Shape
h1(E)	78	#5	28'-6"	—
h2(E)	8	#5	3'-0"	—
n1(E)	83	#7	6'-1"	—
n2(E)	83	#5	5'-2"	—
v1(E)	166	#5	11'-2"	—
Structure Excavation	Cu. Yd.		105.3	
Concrete Structures	Cu. Yd.		52.7	
Reinforcement Bars, Epoxy Coated	Pound		5,760	
Controlled Low-Strength Material	Cu. Yd.		30.8	

BILL OF MATERIAL WALL "B"

Bar	No.	Size	Length	Shape
h3(E)	6	#5	21'-4"	—
u1(E)	38	#5	4'-6"	□
v2(E)	4	#5	11'-0"	—
Concrete Structures	Cu. Yd.		3.5	
Stud Shear Connectors	Each		48	
Reinforcement Bars, Epoxy Coated	Pound		360	
Permanent Steel Sheet Piling	Sq. Ft.		477	



STONE RIPRAP ANCHOR DETAIL

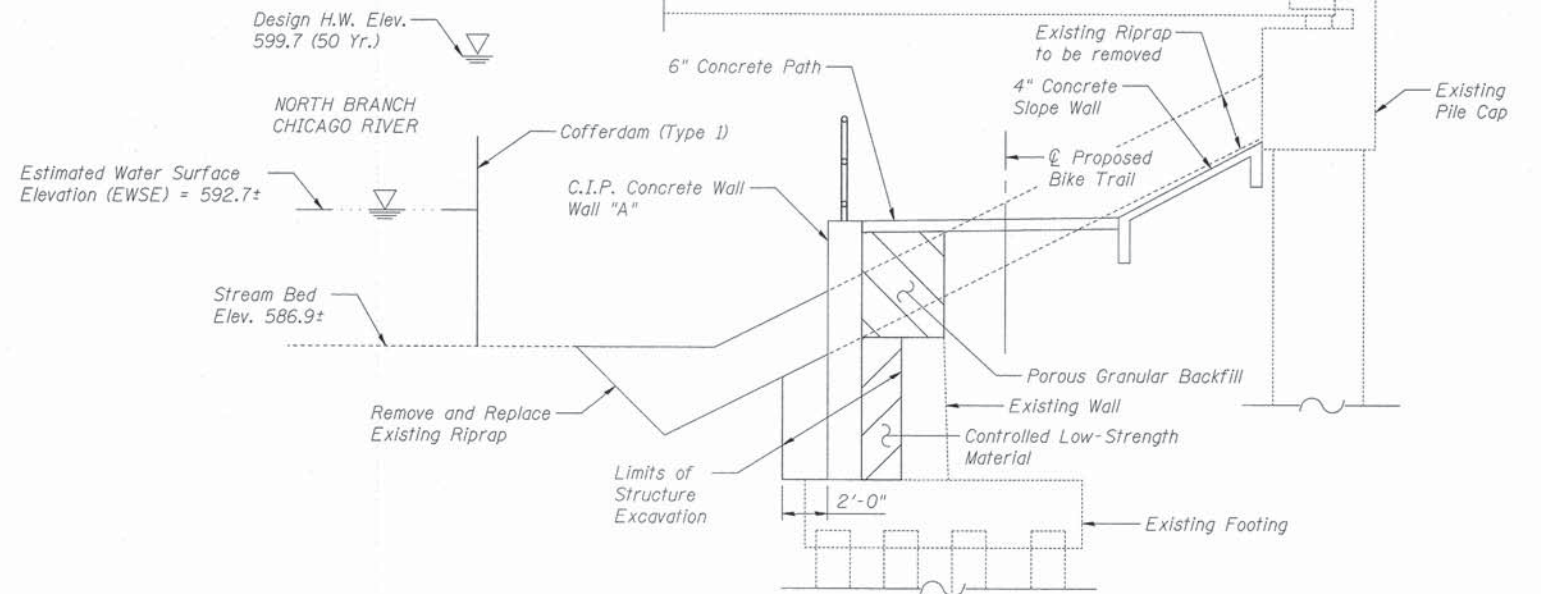


RIPRAP FLANK DETAIL

NOTES

The Estimated Water Surface Elevation (EWSE) is an estimated elevation based on normal flow conditions. The actual elevation encountered may be higher or lower due to seasonal fluctuation or storm events. The Contractor's means and methods should account for such variation and shall not be cause for extra payment.

Cofferdam shall be water-inflated as shown on Sheet XX of XXX.



TYPICAL EXCAVATION AND BACKFILL SECTION



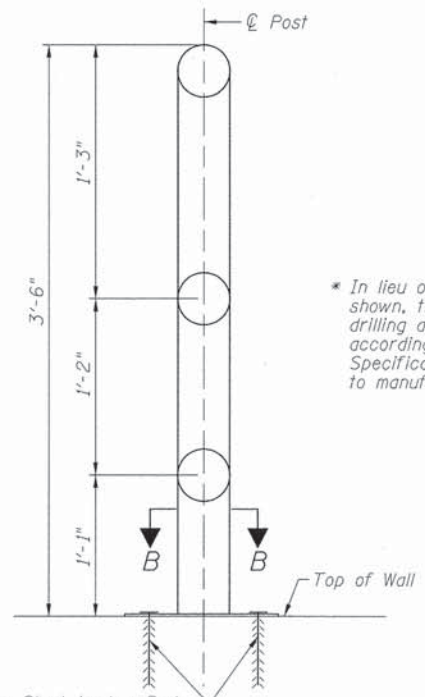
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH TRAIL EXTENSION  
DETAILS AND BILL OF MATERIAL

SHEET NO. 4 OF 5 SHEETS

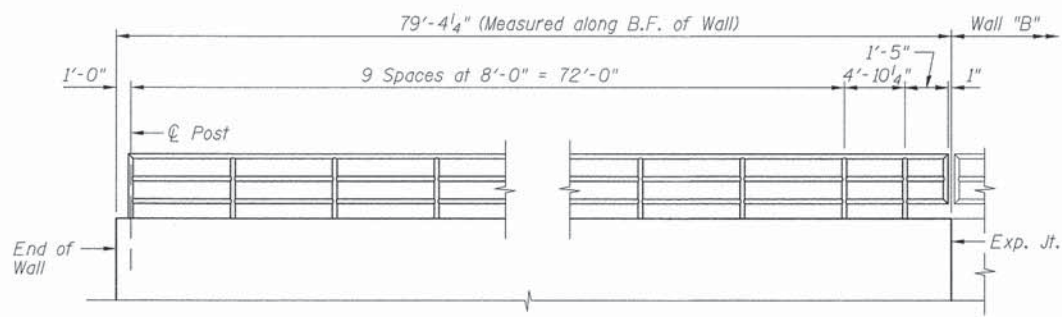
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	08-F3000-21-BT	COOK	129	71
			CONTRACT NO. 61A86	
ILLINOIS FED. AID PROJECT				



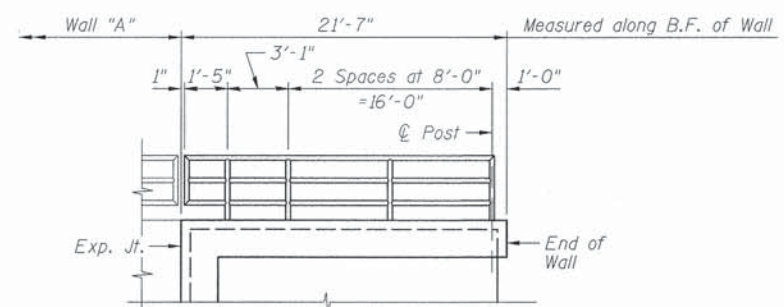
\* In lieu of the cast-in-place anchor rods shown, the Contractor has the option of drilling and setting 3/4" dia. anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to manufacturer's specifications.

\* 3/4"  $\phi$  Stainless Steel Anchor Rods with nut and washer, typ.

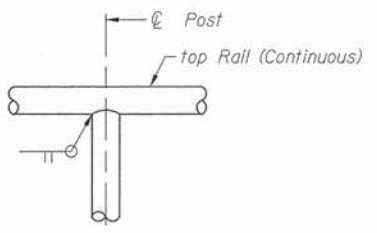
DETAIL - WALL MOUNTED RAIL POST



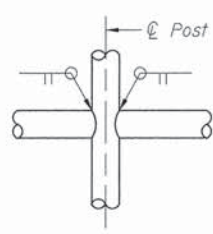
WALL "A"  
Looking North



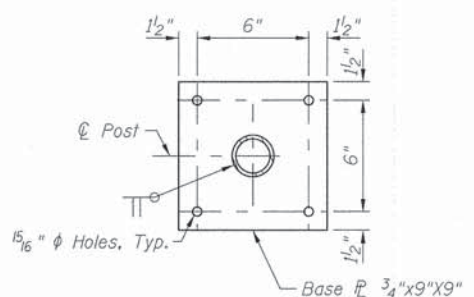
WALL "B"  
Looking North



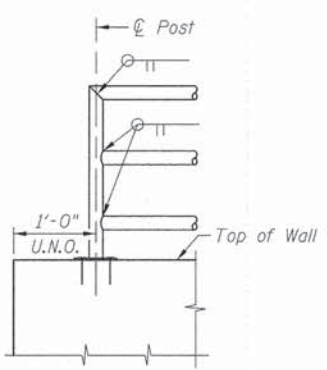
DETAIL 1



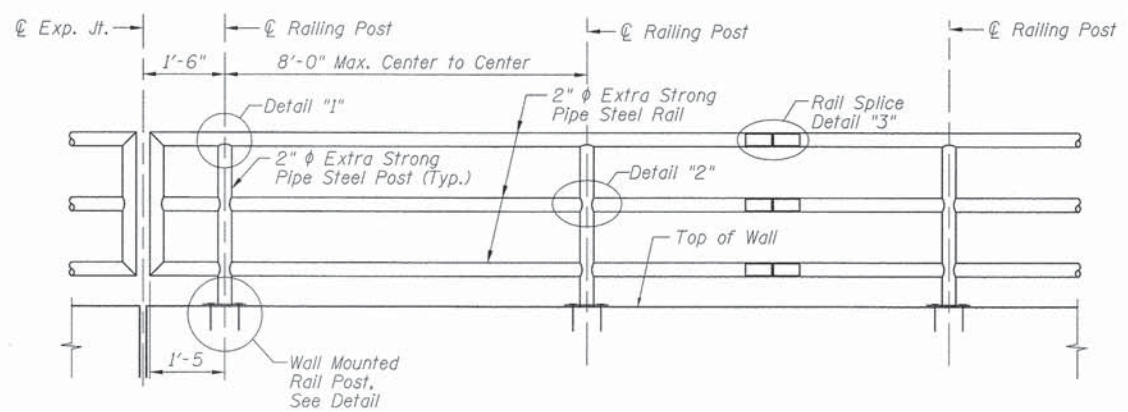
DETAIL 2



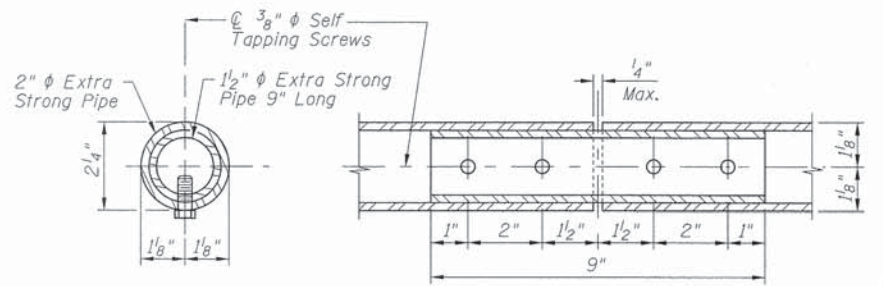
SECTION B-B



ELEVATION SHOWING END POST



TYPICAL PIPE HANDRAIL ELEVATION



DETAIL 3 - RAIL SPLICE

NOTES:

- Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot.
- Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, Structural Steel Tubing.
- All other steel shapes and plates shall conform to the requirements of AASHTO M-270M, Grade 345.
- All posts, railing, splices, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M-111 and ASTM A-385. All bolts, nuts and washers shall be galvanized according to AASHTO M-232 except stainless steel bolts as noted.
- Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.
- Rail to match horizontal profile of bikepath.



FILE NAME =	USER NAME =	DESIGNED - PSK 5-13-14	REVISED
		CHECKED - MBO 5-19-14	REVISED
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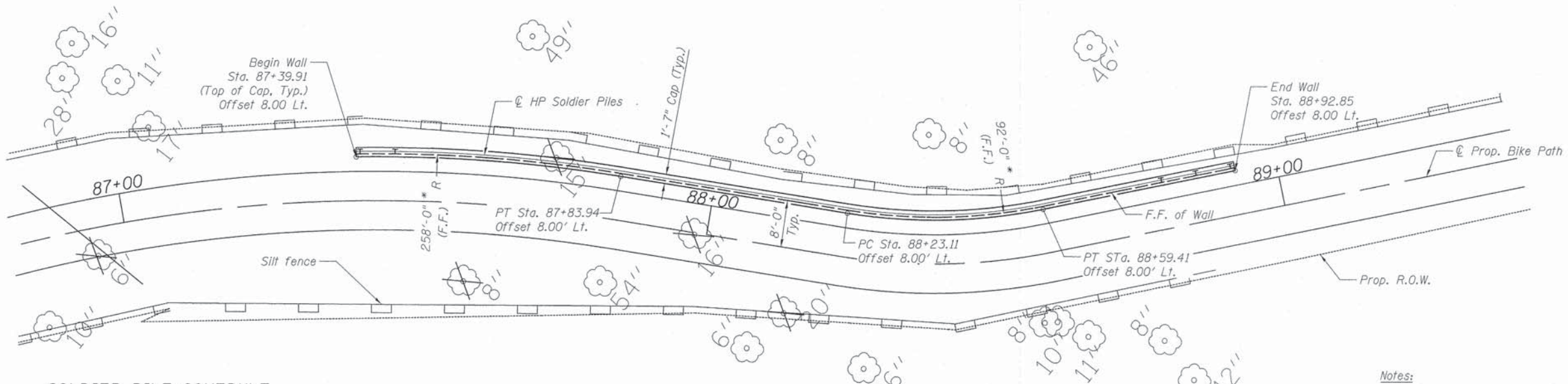
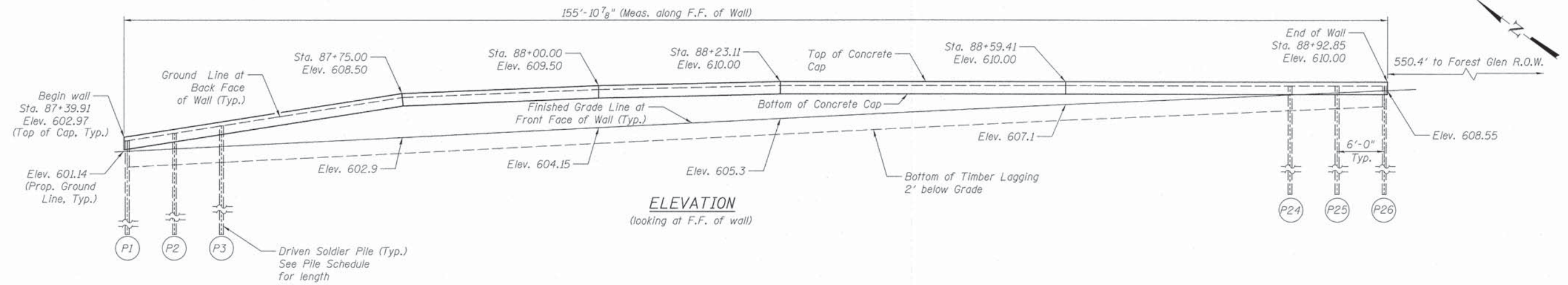
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH TRAIL EXTENSION  
PIPE HANDRAIL DETAILS

SHEET NO. 5 OF 5 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	72
CONTRACT NO. 61A86				
ILLINOIS FED. AID PROJECT				



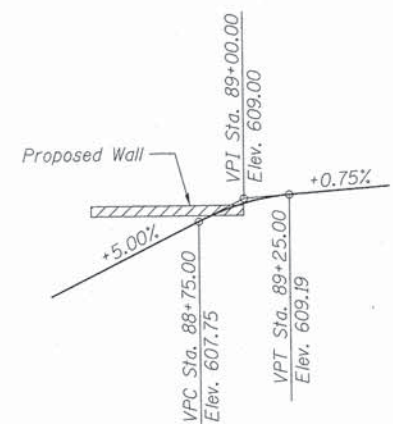


**SOLDIER PILE SCHEDULE**

PILE NO.	STATION	OFFSET	PILE DESIGNATION	LENGTH	BOTTOM ELEV.	TOP ELEV.
P1	87+40.58	8.42' L	HP10x42	15' - 4"	601.18	602.59
P2	87+46.38	8.42' L	HP10x42	16' - 0"	601.47	603.50
P3	87+52.19	8.42' L	HP10x42	18' - 9"	601.76	604.42
P4	87+57.99	8.42' L	HP10x42	21' - 7"	602.05	605.33
P5	87+63.80	8.42' L	HP10x42	22' - 2"	602.34	606.24
P6	87+69.60	8.42' L	HP10x57	24' - 10"	602.63	607.15
P7	87+75.41	8.42' L	HP10x57	26' - 0"	602.92	608.02
P8	87+81.21	8.42' L	HP10x57	25' - 5"	603.21	608.25
P9	87+87.11	8.42' L	HP10x57	25' - 4"	603.51	608.48
P10	87+93.11	8.42' L	HP10x57	25' - 3"	603.81	608.72
P11	87+99.11	8.42' L	HP10x57	25' - 2"	604.11	608.96
P12	88+05.11	8.42' L	HP10x57	25' - 1"	604.40	609.11
P13	88+11.11	8.42' L	HP10x57	24' - 11"	604.70	609.24
P14	88+17.11	8.42' L	HP10x57	24' - 9"	605.00	609.37
P15	88+23.11	8.42' L	HP10x57	24' - 6"	605.3	609.50
P16	88+29.66	8.42' L	HP10x42	22' - 2"	605.62	609.50
P17	88+36.22	8.42' L	HP10x42	21' - 10"	605.95	609.50
P18	88+42.77	8.42' L	HP10x42	21' - 6"	606.27	609.50
P19	88+49.32	8.42' L	HP10x42	19' - 0"	606.60	609.50
P20	88+55.87	8.42' L	HP10x42	18' - 8"	606.92	609.50
P21	88+62.18	8.42' L	HP10x42	18' - 5"	607.22	609.50
P22	88+68.18	8.42' L	HP10x42	15' - 11"	607.49	609.50
P23	88+74.18	8.42' L	HP10x42	15' - 8"	607.75	609.50
P24	88+80.18	8.42' L	HP10x42	15' - 5"	608.02	609.50
P25	88+86.18	8.42' L	HP10x42	15' - 2"	608.29	609.50
P26	88+92.18	8.42' L	HP10x42	14' - 11"	608.55	609.50

**PLAN**

\*Wall built along straight chord between piles



**PROFILE GRADE - BIKE TRAIL**

**DESIGN SPECIFICATIONS**

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

**DESIGN STRESSES**

Field units  
 f'c = 3,500 psi (conc.)  
 fb = 1,600 psi (timber lagging)  
 fy = 60,000 psi (reinf.)  
 fy = 50,000 psi (m270 grade 50)

0.00 Chicago City Datum = 579.88 USGS

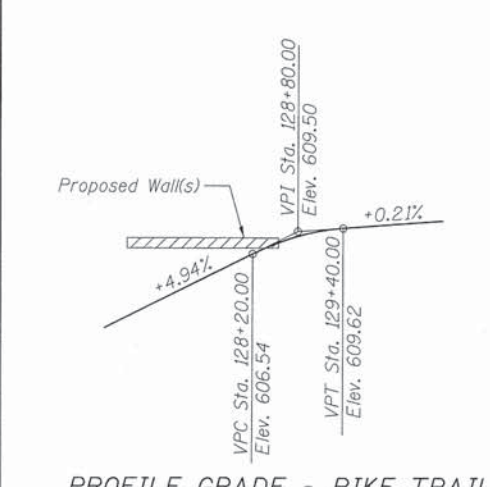
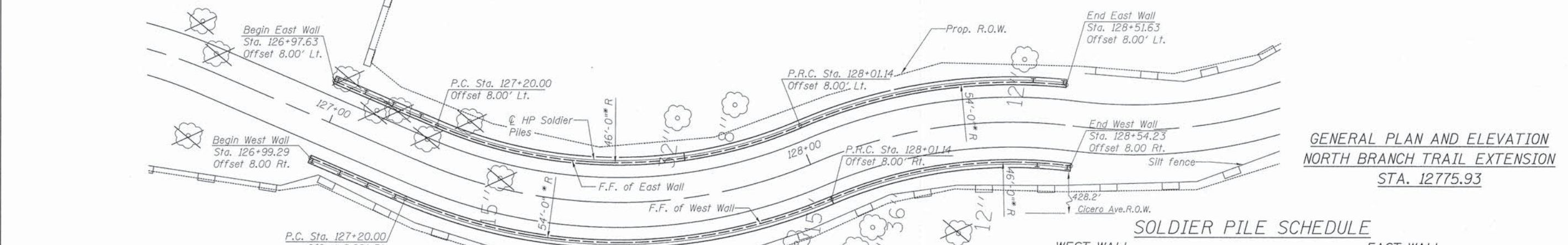
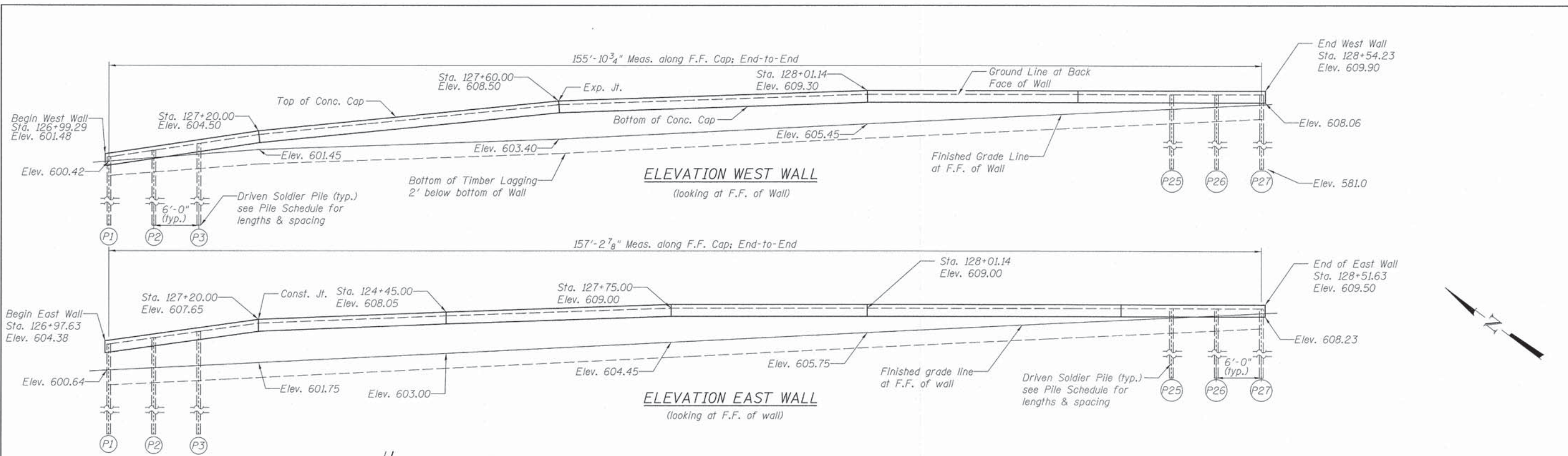
**Notes:**

- Pile lengths are approximate and shall be determined based on layout.
  - Tree root zones not to be disturbed. Caliper to root zone: 1" = 1'. An 8" diameter caliper tree will have a 8' root zone.
  - Utilities to be located prior to excavating & driving
- All offsets are to the left of the centerline. Stations and offsets are to the centerline of the piles unless otherwise noted.

**GENERAL PLAN AND ELEVATION**

**NORTH BRANCH TRAIL**

STA. 88+16.38



**SOLDIER PILE SCHEDULE**

WEST WALL						EAST WALL							
PILE NO.	STATION	OFFSET	PILE DESIGNATION	LENGTH	BOTTOM ELEV.	TOP ELEV.	PILE NO.	STATION	OFFSET	PILE DESIGNATION	LENGTH	BOTTOM ELEV.	TOP ELEV.
P1 W	126+99.96	8.42' R	HP10x42	15' - 8"	585.31	600.99	P1 E	126+98.30	8.42' L	HP10x42	21' - 7"	600.67	603.96
P2 W	127+05.96	8.42' R	HP10x42	15' - 8"	586.21	601.89	P2 E	127+04.30	8.42' L	HP10x42	22' - 2"	600.97	604.80
P3 W	127+11.96	8.42' R	HP10x42	15' - 8"	587.11	602.79	P3 E	127+10.30	8.42' L	HP10x57	26' - 3"	601.27	606.61
P4 W	127+17.96	8.42' R	HP10x42	19' - 2"	584.54	603.69	P4 E	127+16.30	8.42' L	HP10x57	26' - 2"	601.57	606.85
P5 W	127+23.96	8.42' R	HP10x42	19' - 2"	585.21	604.37	P5 E	127+22.51	8.42' L	HP10x57	26' - 1"	601.88	607.10
P6 W	127+29.96	8.42' R	HP10x42	19' - 2"	585.77	604.92	P6 E	127+29.06	8.42' L	HP10x57	26' - 0"	602.20	607.36
P7 W	127+34.72	8.42' R	HP10x42	22' - 2"	583.30	605.47	P7 E	127+35.61	8.42' L	HP10x57	26' - 0"	602.53	607.62
P8 W	127+40.26	8.42' R	HP10x42	22' - 2"	583.85	606.03	P8 E	127+42.17	8.42' L	HP10x57	25' - 11"	602.86	607.89
P9 W	127+45.79	8.42' R	HP10x42	22' - 2"	584.41	606.58	P9 E	127+48.72	8.42' L	HP10x57	25' - 3"	603.18	608.12
P10 W	127+51.33	8.42' R	HP10x57	24' - 11"	582.23	607.13	P10 E	127+55.27	8.42' L	HP10x57	25' - 2"	603.50	608.34
P11 W	127+56.86	8.42' R	HP10x57	24' - 11"	582.78	607.69	P11 E	127+61.82	8.42' L	HP10x57	25' - 1"	603.91	608.56
P12 W	127+62.40	8.42' R	HP10x57	24' - 11"	583.18	608.08	P12 E	127+68.38	8.42' L	HP10x57	25' - 0"	604.13	608.78
P13 W	127+67.93	8.42' R	HP10x57	24' - 11"	583.37	608.27	P13 E	127+74.93	8.42' L	HP10x57	24' - 11"	604.45	609.00
P14 W	127+73.47	8.42' R	HP10x57	24' - 11"	583.56	608.46	P14 E	127+81.48	8.42' L	HP10x57	24' - 7"	604.77	609.00
P15 W	127+79.00	8.42' R	HP10x57	24' - 11"	583.74	608.65	P15 E	127+88.03	8.42' L	HP10x42	22' - 2"	605.10	609.00
P16 W	127+84.54	8.42' R	HP10x57	24' - 11"	583.93	608.83	P16 E	127+94.59	8.42' L	HP10x42	21' - 11"	605.42	609.00
P17 W	127+90.07	8.42' R	HP10x57	24' - 11"	584.12	609.02	P17 E	128+01.14	8.42' L	HP10x42	21' - 7"	605.75	609.00
P18 W	127+95.61	8.42' R	HP10x42	22' - 4"	586.87	609.21	P18 E	128+06.68	8.42' L	HP10x42	19' - 1"	606.02	609.00
P19 W	128+01.14	8.42' R	HP10x42	22' - 4"	587.06	609.40	P19 E	128+12.21	8.42' L	HP10x42	18' - 10"	606.30	609.00
P20 W	128+07.69	8.42' R	HP10x42	22' - 4"	587.06	609.40	P20 E	128+17.75	8.42' L	HP10x42	18' - 7"	606.57	609.00
P21 W	128+14.24	8.42' R	HP10x42	22' - 4"	587.06	609.40	P21 E	128+23.28	8.42' L	HP10x42	18' - 3"	606.84	609.00
P22 W	128+20.80	8.42' R	HP10x42	19' - 1"	590.29	609.40	P22 E	128+28.82	8.42' L	HP10x42	15' - 10"	607.12	609.00
P23 W	128+27.35	8.42' R	HP10x42	19' - 1"	590.29	609.40	P23 E	128+34.35	8.42' L	HP10x42	15' - 7"	607.39	609.00
P24 W	128+33.90	8.42' R	HP10x42	19' - 1"	590.29	609.40	P24 E	128+39.89	8.42' L	HP10x42	15' - 3"	607.67	609.00
P25 W	128+40.45	8.42' R	HP10x42	15' - 11"	593.45	609.40	P25 E	128+45.42	8.42' L	HP10x42	15' - 0"	607.94	609.00
P26 W	128+47.01	8.42' R	HP10x42	15' - 11"	593.45	609.40	P26 E	128+50.96	8.42' L	HP10x42	14' - 9"	608.21	609.00
P27 W	128+53.56	8.42' R	HP10x42	15' - 11"	593.45	609.40							

**DESIGN SPECIFICATIONS**  
2012 AASHTO LRFD bridge design specifications, (6th edition with 2012 Interims)

**DESIGN STRESSES**  
Field units  
f<sub>c</sub> = 3,500 psi (conc.)  
f<sub>b</sub> = 1,600 psi (treated timber lagging)  
f<sub>y</sub> = 60,000 psi (reinf.)  
f<sub>y</sub> = 50,000 psi (m270 grade 50)

**Notes:**  
1. Pile lengths are approximate and shall be determined based on layout. Stations and offsets are to the centerline of the piles or front face of wall.  
2. Utilities to be located prior to excavating & driving.  
3. Offset is to centerline of soldier pile.

0.00 Chicago City Datum = 579.88 USGS



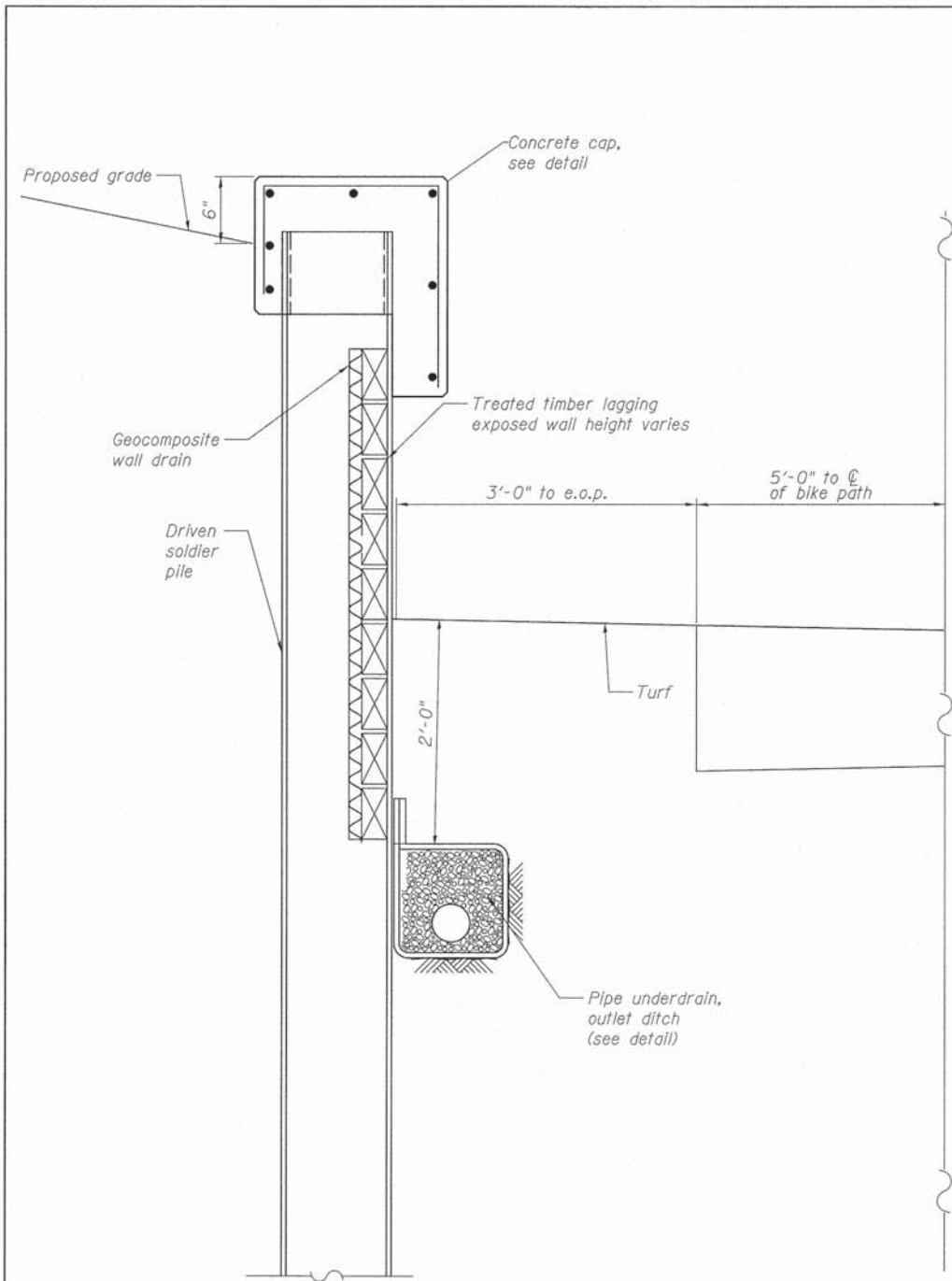
FILE NO. =	USER NAME =	DESIGNED - RAC	REVISED
		CHECKED - JRT	REVISED
PLOT SCALE =		DRAWN - RAC	REVISED
PLOT DATE =		CHECKED - JRT	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH TRAIL EXTENSION**

SHEET NO. 2 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	74
CONTRACT NO. 61A86			ILLINOIS FED. AID PROJECT	



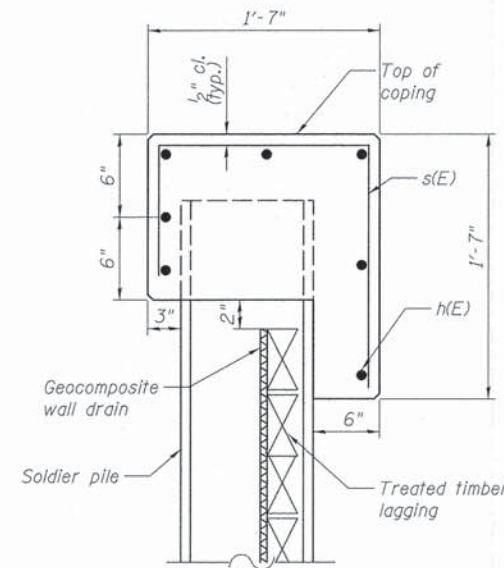
**SOLDIER PILE WALL TYPICAL SECTION**

**Notes:**

The timber lagging shall conform to articles 507 and 1007.03 of the standard specifications.

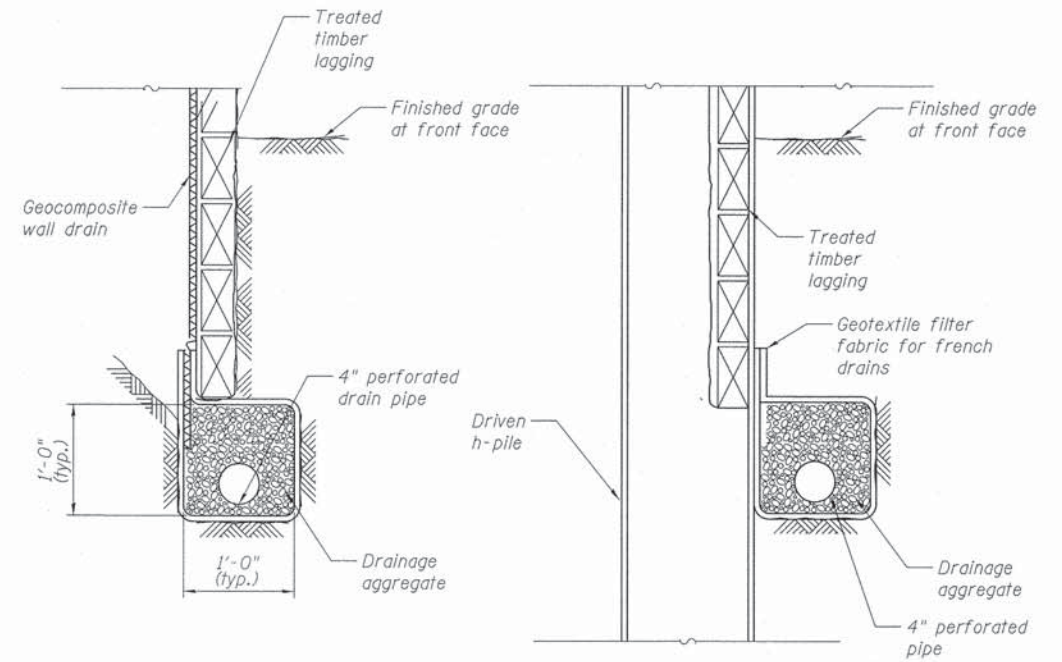
The treated timber lagging shall be structural square cut dense southern pine or dense douglas fir.

The drain shall be placed behind the lagging with the pervious side toward the soil according to section 591 of the standard specifications and shall be centered between the piles. The drain shall be installed in stages as the excavation proceeds downward making sure that drain splices as well as the top side edges are covered as required to protect the drain.



**CONCRETE CAP**

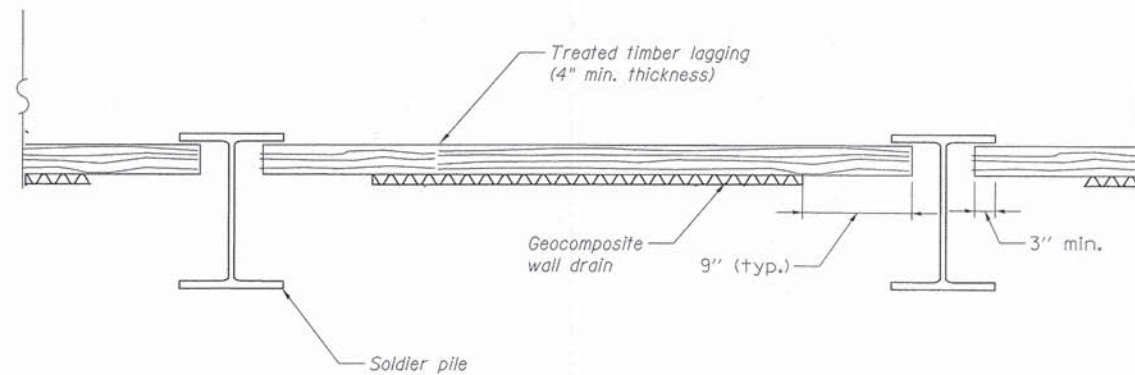
**MINIMUM BAR LAP**  
#5 BAR = 2'-11"



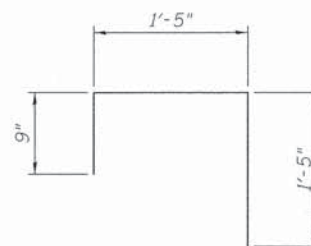
**BETWEEN SOLDIER PILES**

**AT SOLDIER PILES**

**PIPE UNDERDRAIN DETAIL**



**DETAIL PLAN**



**BAR s(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h (E)	63	#5	32'-11"	—
h (E)	21	#5	30'-0"	—
h (E)	21	#5	37'-3"	—
s (E)	472	#5	3'-9"	□
Structure Excavation			Cu. Yd.	273
Concrete Structures			Cu. Yd.	33
Pipe Underdrain			Ft.	456
Reinforcement Bars, Epoxy Coated			Pound	5,487
Geocomposite Wall Drain			Sq. Yd.	207
Driving Soldier Piles			Feet	1,679
Furnishing Soldier Piles (HP Piles)			Feet	1,679
Treated Timber Lagging			Sq. Ft.	2,479



USER NAME =	DESIGNED - RAC	REVISED
PLOT SCALE =	CHECKED - JRT	REVISED
PLOT DATE =	DRAWN - RAC	REVISED
	CHECKED - JRT	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

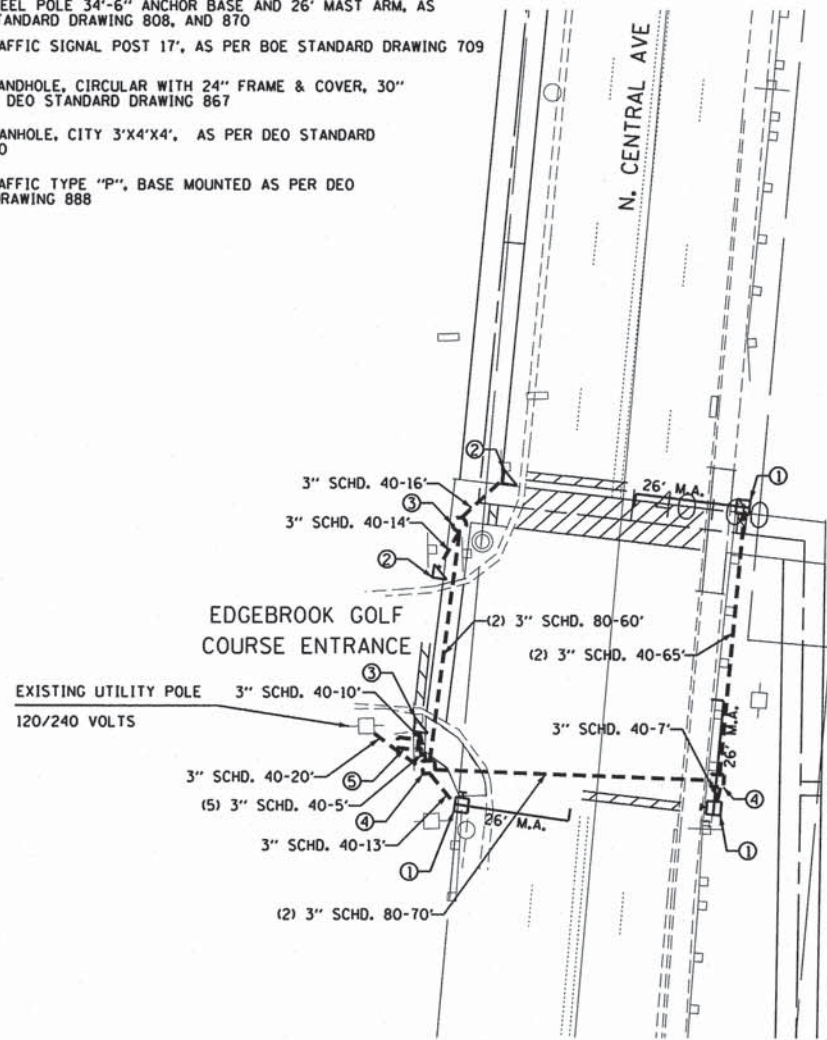
**NORTH BRANCH TRAIL EXTENSION**

SHEET NO. 3 OF 3 SHEETS


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	75
			CONTRACT NO. 61A86	
ILLINOIS FED. AID PROJECT				

**CONSTRUCTION & INSTALLATION NOTES**

- ① INSTALL STEEL POLE 34'-6" ANCHOR BASE AND 26' MAST ARM, AS PER DEO STANDARD DRAWING 808, AND 870
- ② INSTALL TRAFFIC SIGNAL POST 17', AS PER BOE STANDARD DRAWING 709
- ③ INSTALL HANDHOLE, CIRCULAR WITH 24" FRAME & COVER, 30" I.D., AS PER DEO STANDARD DRAWING 867
- ④ INSTALL MANHOLE, CITY 3'X4'X4', AS PER DEO STANDARD DRAWING 730
- ⑤ INSTALL TRAFFIC TYPE "P", BASE MOUNTED AS PER DEO STANDARD DRAWING 888



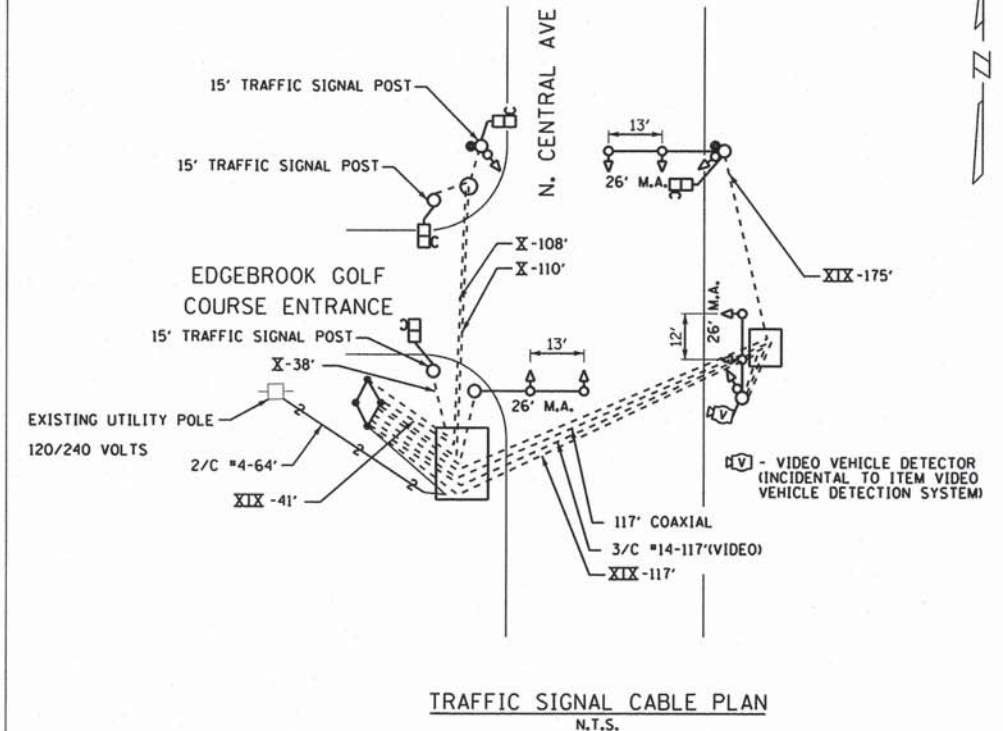
**CONDUIT AND FOUNDATION PLAN**  
SCALE 1" = 20'

NO.	BY	DATE	DESCRIPTION
REVISIONS			
CONSULTANT:			
 GANDHI AND ASSOCIATES, INC. ENGINEERS AND PLANNERS 600 N. NORTHWEST CORNER SUITE 200 CHICAGO, ILLINOIS 60610 TEL: 312.777.1114 FAX: 312.777.1115			
N. CENTRAL AVE AT EDGEBROOK GOLF COURSE ENTRANCE <b>CITY OF CHICAGO</b>			
DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING			
DRAWN: SHM		SHEET NO.	
CHECKED: PKG			
APPROVED: PKG			
DATE: AUGUST 22, 2014			
SCALE: 1" = 20'			
CONTRACT NO.		PROJECT NO. XXXX	

**GENERAL NOTES**


1. ALL SIGNAL SECTIONS TO BE STANDARD 12" SIZE L.E. D. TYPE.
2. ALL VEHICULAR SIGNALS TO BE 3 OR 5 SECTION UNITS AS SHOWN ON PLANS.
3. ALL PEDESTRIAN SIGNALS TO BE 2 SECTION UNITS COUNTDOWN TYPE.
4. PEDESTRIAN SIGNALS TO BE INSTALLED BELOW VEHICULAR SIGNALS WHERE APPLICABLE.
5. ALL MAST ARMS TO BE STEEL MONOTUBE TYPE, SIZE AS INDICATED ON THE PLANS.  
EXISTING SERVICE CABLE TO REMAIN WHERE APPLICABLE.
6. ALL CABLES MUST BE RACKED, TRAINED AND TAGGED IN ALL MANHOLES AND HANDHOLES.
7. PVC CONDUITS SHALL BE STANDARD (3) 3" SCHD. 80 UNDER ROADWAYS AND DRIVEWAYS AND SCHD. 40 IN TRENCH, SIZE AS NOTED.
8. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE PAINTED GLOSS BLACK UNLESS OTHERWISE SPECIFIED AND APPROVED BY BOE.

①TIME  
②DATE  
③FILE



**LEGEND**

 VIDEO DETECTION CAMERA

NO.	BY	DATE	DESCRIPTION
REVISIONS			
CONSULTANT:			
 GANDHI AND ASSOCIATES, INC. ENGINEERS AND PLANNERS 600 N. NORTHWEST CORNER SUITE 200 CHICAGO, ILLINOIS 60610 TEL: 312.777.1114 FAX: 312.777.1115			
N. CENTRAL AVE AT EDGEBROOK GOLF COURSE ENTRANCE <b>CITY OF CHICAGO</b>			
DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING			
DRAWN: SHM		SHEET NO.	
CHECKED: PKG			
APPROVED: PKG			
DATE: AUGUST 22, 2014		<b>76 of 129</b>	
SCALE: 1" = 20'			
CONTRACT NO. 61A86		PROJECT NO. XXXX	

FILE NAME: D:\Cock\FPD\_25387819\_Nor-18Branch\Ext\Phase 2 Engineering\Signal\Phase 2 Engineering\Signal\Plan\Details\CDOT\_Signal\_Details\_Ldr

PROPOSED	PRESENT		PROPOSED	PRESENT	
		SIGNAL, TRAFFIC 3 SECTION 1-WAY ADJUSTABLE, 12" OR AS NOTED			HANDHOLE, HEAVY DUTY, 36" I.D. (DWG.#866)
		SIGNAL, TRAFFIC 3 SECTION 2-WAY ADJUSTABLE, 12" OR AS NOTED			HANDHOLE, CIRCULAR WITH 24" FRAME & COVER, 30" I.D. (#867)
		SIGNAL OPTICALLY PROGRAMMED			MANHOLE, CITY 3'X4'X4' DWG. #729 or 730; 4'X6'X6' DWG. #732 or 733.
		SIGNAL, PEDESTRIAN, DON'T WALK/WALK			FOUNDATION, CONTROLLER OR PEDESTAL, 13" B.C., 20"X5" (DWG. #709)
		SIGNAL FACE ARROW, 12" COLOR AS NOTED			FOUNDATION, TRAFFIC CONTROLLER DWG. #854, F.A. TERMINAL FND. DWG. #11972
		SIGNAL FACE, 1 SECTION YELLOW/GREEN ARROW DUAL INDICATION			FOUNDATION, TRAFFIC TYPE "P", BASE MOUNT. (DWG. #888)
		PUSH BUTTON, PEDESTRIAN			FOUNDATION, CONTROLLER STREET LIGHT, SPECIAL, 100A & 200A. (DWG.#876 & # 880)
		SIGN, ILLUMINATED, WITH MESSAGE OR SYMBOL AS INDICATED			FOUNDATION, TRANSCLOSURE; TRANSCLOSURE HOUSING. (DWG.# 583 & #891)
		MAST ARM, MONOTUBE, STEEL, SIZE AS INDICATED (SEE DWG. #870)			CONTROLLER, UNDERPASS LIGHTING 120V. & 240V. (DWG. #860 & #861)
		MAST ARM, TRUSS, ALUMINUM, SIZE AS INDICATED			MANHOLE, UTILITY, E=COMMONWEALTH EDISON; T=TELEPHONE; G=PEOPLES GAS; W=CITY WATER; P=CHGO PARK DISTRICT; CTA=C.T.A.; S=SEWER
		CONTROLLER, TRAFFIC SIGNAL, PEDESTAL OR BASE MOUNTED AS INDICATED			DETECTOR LOOP IN PAVEMENT
		CONTROLLER, STREET LIGHTING, PEDESTAL OR BASE MOUNTED. (DWG. 876 or 880)			CONDUIT or P.V.C., NUMBER, SIZE & TYPE. (AS NOTED)
		CONTROLLER, STREET LIGHTING, POLE MOUNTED (DWG. #11940)			CONDUIT or P.V.C. ENCASED IN CONCRETE. (SECTION or NUMBER OF CONDUIT INDICATED)
		POLE, WOOD, COMMONWEALTH EDISON COMPANY, SERVICE			LUMINAIRE, H.P.S.V. 400W LAMP, 240V, SEMI-CUTOFF
		POLE, CITY STEEL, ANCHOR BASE, 34'-6", 3 GA., 10" DIA. AND 15" B.C. 24"X9" FND. W/1/4" ANCHOR RODS DRG. #818.			LUMINAIRE, H.P.S.V. 400W LAMP, 240V, CUTOFF
		POLE, CITY STEEL, ANCHOR BASE, 34'-6", 3 GA., 10" DIA. AND 15" B.C. 24"X9" FND. W/1/4" ANCHOR RODS DRG. #818 (16", 20" or 26" M.A.)			LUMINAIRE, H.P.S.V. 310W LAMP, 240V
		POLE, CITY STEEL, ANCHOR BASE, 34'-6", 3 GA., 11" DIA. AND 17 1/4" B.C. 30"X9" FND. W/1/4" ANCHOR RODS DRG. #816. (30' M.A.)			LUMINAIRE, H.P.S.V. 150W LAMP, 240V
		POLE, CITY STEEL, ANCHOR BASE, 34'-6", 3 GA., 12 1/2" DIA. AND 16 1/2" B.C. 30"X11" FND. W/1/2" ANCHOR RODS DRG.#817. (35", 40" or 44" M.A.)			LUMINAIRE, H.P.S.V. 250W LAMP, 120V. (ALLEY LIGHT)
		POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA., 10" DIA., WITH 3 GA. BAL. HSG. BASE AND 17 1/4" B.C. ON 30"X9" FND. W/ 1/4" ANCHOR RODS DRG. #816.			TERMINAL, CABINET F.A. & P.C.
		POLE, CITY STEEL, ANCHOR BASE, 20'-27'-6", 29'-6", 7 GA., WITH STEEL BAL. HSG. BASE AND FND. W/10" D. B.C. AND 1" ANCHOR RODS DRG. #719.			FIRE ALARM BOX, MOUNTED
		POLE, CITY STEEL, ANCHOR BASE, 20'-27'-6", 29'-6", 7 GA., AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DRG. #11408B.			FIRE ALARM BOX, POLE MOUNTED
		POLE, CITY STEEL, ANCHOR BASE, 20'-27'-6", 29'-6", 3 GA., AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DRG. #11408B.			CABLE, TRAFFIC SIGNAL, COMMUNICATION, 1-PAIR #14 SHIELDED, IN CONDUIT
		POLE, CITY STEEL, ANCHOR BASE, 20'-27'-6", 29'-6", 3 GA., AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DRG. #11408B.			CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2/C-#4, 600 V. EPR, IN CONDUIT
		POLE, CITY STEEL, ANCHOR BASE, 20'-27'-6", 29'-6", 7 GA., AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DRG. #753.			CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2 1/C-#2 or #1/0 600V. EPR IN CONDUIT
		POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA., AND FND. WITH 11 1/2" B.C. AND 1" ANCHOR RODS DRG. #753.			CABLE, TRAFFIC SIGNAL, 7/C-#12 or #14, 600V. EPR IN CONDUIT
		POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA., AND FND. WITH 11 1/2" B.C. AND 1" ANCHOR RODS DRG. #753.			CABLE, TRAFFIC SIGNAL, 10/C-#12 or #14, 600V. EPR IN CONDUIT
		POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA., ALUM. BHB AND FND. WITH 15" B.C.-24"X7" WITH 1" ANCHOR RODS DRG. #691.			CABLE, TRAFFIC SIGNAL, 14/C-#12 600V. EPR IN CONDUIT
		POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA., ALUM. BHB AND FND. WITH 15" B.C. 24"X7" WITH 1" ANCHOR RODS DRG. #691.			CABLE, TRAFFIC SIGNAL, 19/C-#12 or #14, 600V. EPR IN CONDUIT
		POLE, CITY ALUMINUM, WITH ROUND BAL. HSG. BASE, 25', 28', or 30' ON FND. WITH 14" B.C., ACQUIRED FROM CHICAGO PARK DISTRICT.			CABLE, STREET LIGHT, 2 1/C-#6, 600V. RINS IN PARKWAY
		POLE, CITY STEEL, EMBEDDED, 4"X 9"X 35' 7 GA., TAPERED TUBULAR. (DWG. #658)			CABLE, STREET LIGHT, 2 1/C-#6, 600V. RINS IN CONDUIT
		POLE, CITY STEEL, EMBEDDED, 4"X 9"X 35' 3 GA., TAPERED TUBULAR. (DWG. #658)			CABLE, STREET LIGHT, 2 1/C-#6 EPRN 600V. & 1 1/C-#8 GREEN, TRIPLEXED, IN CONDUIT
		POLE, CITY STEEL, EMBEDDED. (ACQUIRED FROM CTA)			CABLE, STREET LIGHT, 3 1/C-#1/0, or #2/0, or #4, 600V. EPR IN CONDUIT
		COLUMN, ELEVATED STRUCTURE			WIRE, STREET LIGHT, 2 1/C-#6, HDNS. AERIAL
		POLE, WOOD. (SIZE AS NOTED)			WIRE, STREET LIGHT, 2 1/C-#6 & 1 1/C #8, HDNS. AERIAL
		POLE, FOUNDATION WITH ELBOWS AS INDICATED. (SIZE AS NOTED)			CABLE, STREET LIGHT AERIAL, 3 1/C-#4 or #2 SELF SUPPORTING, 600V EPR
		POLE, ORNAMENTAL OR OTHER, AS INDICATED ON THE PLANS			CABLE, F.A. & P.C. AERIAL, 1/C-#10, NUMERAL DENOTES QUANTITY AS INDICATED)
					CABLE, F.A. & P.C. AERIAL, SELF SUPPORTING, #19-(NUMBER OF PAIRS AS INDICATED)
					CABLE, F.A. & P.C., IN CONDUIT, #19-(NUMBER OF PAIRS AS INDICATED)
					DOWNLIGHT ASSEMBLY. (DWG. #850)
					LIGHT, TRAFFIC SAFETY ISLAND
					FLASHING BEACON & DOWNLIGHT

ORNAMENTAL LUMINAIRES		
PROPOSED	EXISTING	
		310W PENDANT (240V)
		400W PENDANT (240V)
		250W PENDANT (240V)
		150W ACORN (120V)
		150W ACORN (240V)
		50W ACORN (240V)
		100W ACORN (240V)
		150W GLOBE (240V)
		100W GLOBE (240V)
		50W GLOBE (240V)

C 04-01-02	REVISED/REDRAW	R. POOL/B. I.
B 12-4-01	ADDED ORNAMENTAL SYMBOLS	
A 8-6-96	REDRAWN	

DATE		REVISION
<b>STANDARD CODE FOR TRAFFIC SIGNALS/ STREET LIGHTING</b>		
CITY OF CHICAGO DEPT. OF STREETS AND SANITATION DIVISION OF ELECTRICAL ENGINEERING		
DRAFTSMAN: E. IVY	CHIEF DRAFTSMAN: R. CARTER	ENGINEER: R. POOL/R.C./W.T.
SUPERVISING ENGINEER:	ELC. DESIGN ENGR.:	DWG. NO. <b>826</b>
DEPT. OF CONSTRUCTION		DATE:
SIZE: 22" X 36"	SCALE:	



USER NAME = David.Landvoer	DESIGNED - PMV	REVISED -
PLOT SCALE = 10,0000' / 1"	DRAWN - PMV	REVISED -
PLOT DATE = 12/11/2014	CHECKED - NPP	REVISED -
	DATE - 10/20/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>NORTH BRANCH BIKE TRAIL EXTENSION CDOT DETAILS</b>			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	77
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

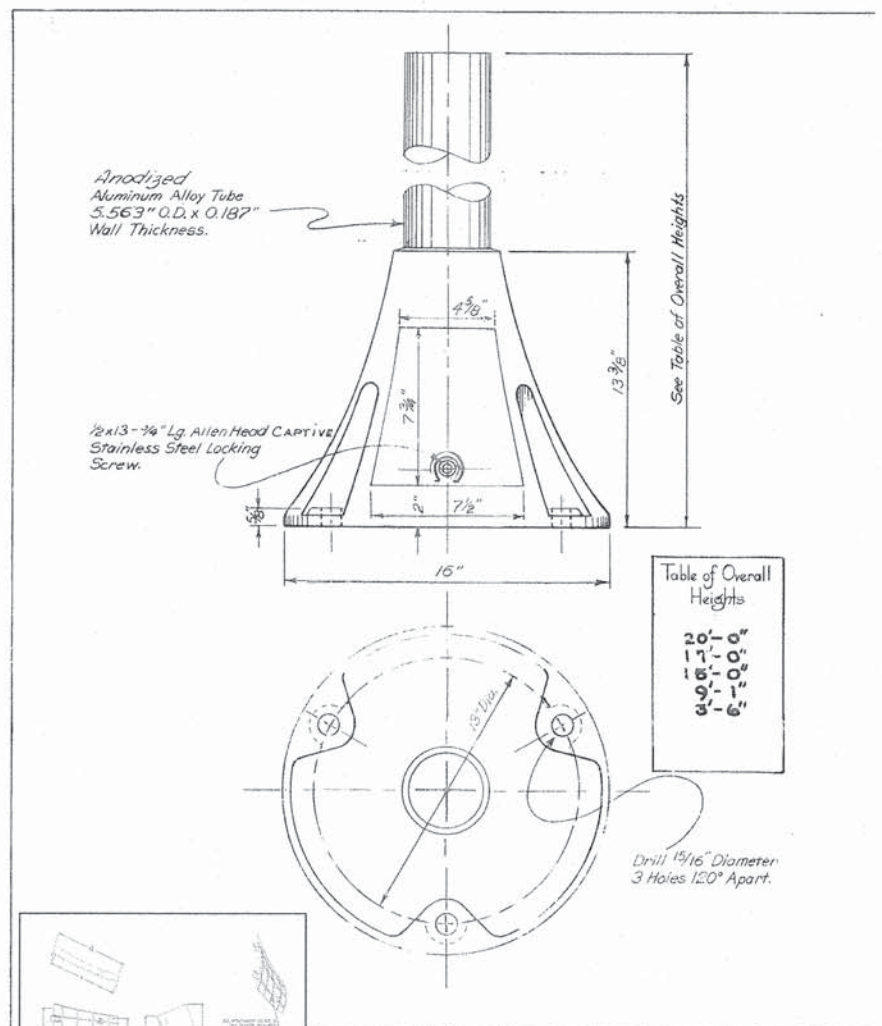
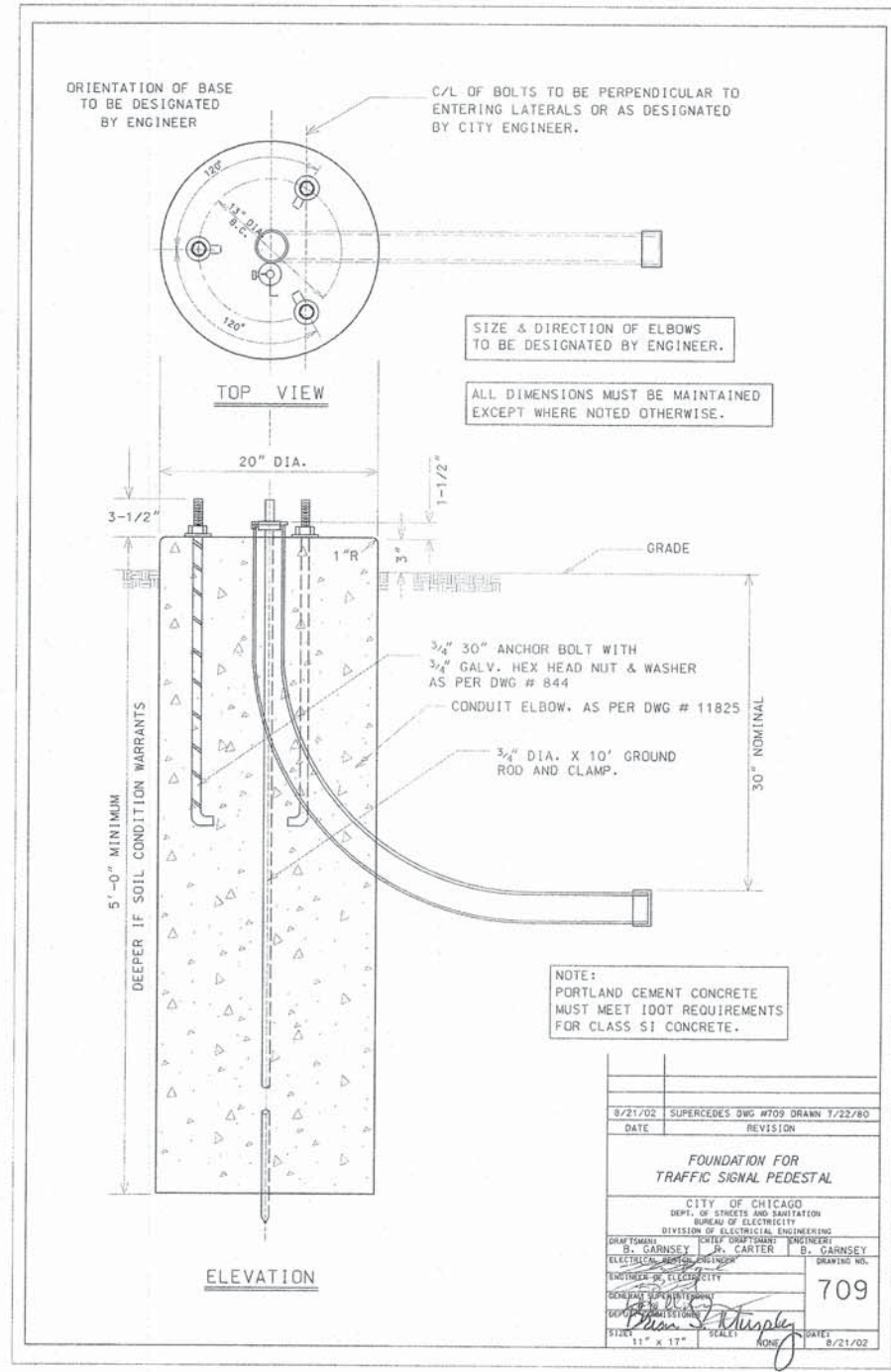


Table of Overall Heights

20'-0"
17'-0"
15'-0"
9'-1"
3'-6"

ALUMINUM PEDESTAL BASE WITH HANDHOLE  
for  
Street Lighting Controller, Traffic Signal  
Controller and Traffic Signal Heads.

REVISED		CITY OF CHICAGO DEPT. OF STREETS AND SANITATION DIVISION OF ELECTRICAL ENGINEERING		
CHANGED OVERALL HEIGHTS 5-22-81	A	5-5-60	DRAWN R. COLLEY	CHECKED J. BORE
Revised Table of Overall Heights	B	6-30-60		ENGINEER Ruzicka
Revised O.D. of Pedestal	C	12-21-60		DRG. NO. 526
Revised Specification Number	D	3-23-62		
REVISED TABLE OF OVERALL HEIGHTS	E	6-4-64		
REVISED DOOR DIMENSIONS	F	7-14-71		
Revised Overall Heights	G	OCT. 26, 73		



NOTE:  
PORTLAND CEMENT CONCRETE  
MUST MEET IDOT REQUIREMENTS  
FOR CLASS S1 CONCRETE.

8/21/02	SUPERCEDES DWG #709 DRAWN 1/22/80
DATE	REVISION
FOUNDATION FOR TRAFFIC SIGNAL PEDESTAL	
CITY OF CHICAGO DEPT. OF STREETS AND SANITATION BUREAU OF ELECTRICITY	
DRAWN BY B. GARNSEY	ENGINEER B. GARNSEY
CHECKED BY J. CARTER	DATE 8/21/02
SCALE 1 1/2" x 1 1/2"	DRAWING NO. 709

FILE NAME: Z:\Cook\FPD\_25597389\_NorthBranchTrail\Roadway\Phase 2\_Engineering\SIGNALS\SIGNAL\_PLANS\0826\CDOT\_Signal\_Details\_Log.dwg



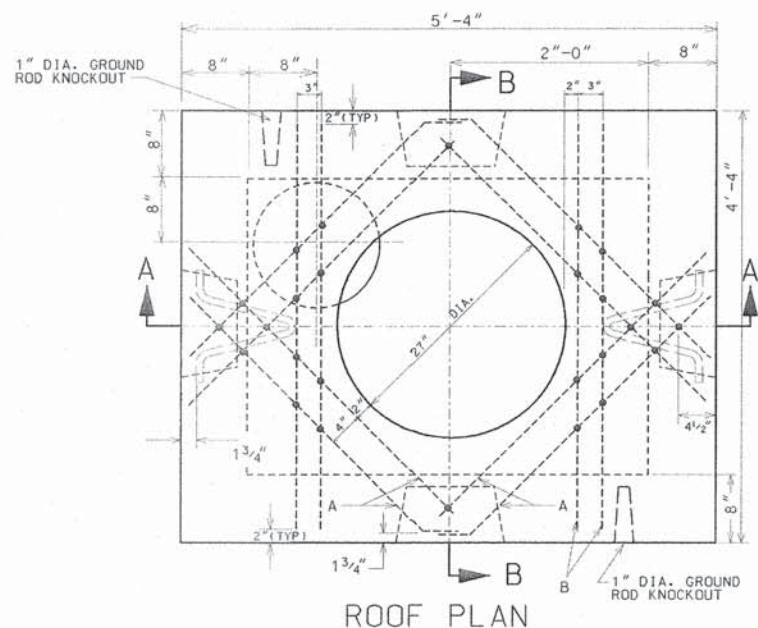
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DESIGNED -  
DRAWN -  
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DATE = 12/11/2014

REVISIONS  
REVISED -  
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REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
CDOT DETAILS  
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	78
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



EXCAVATION (CONSTRUCTION INFORMATION)	
COMPLETE MANHOLE	6.0 CU. YDS.
NEW ROOF ONLY	2.0 CU. YDS
SHEETING MANHOLE	150.0 SQ. FT.

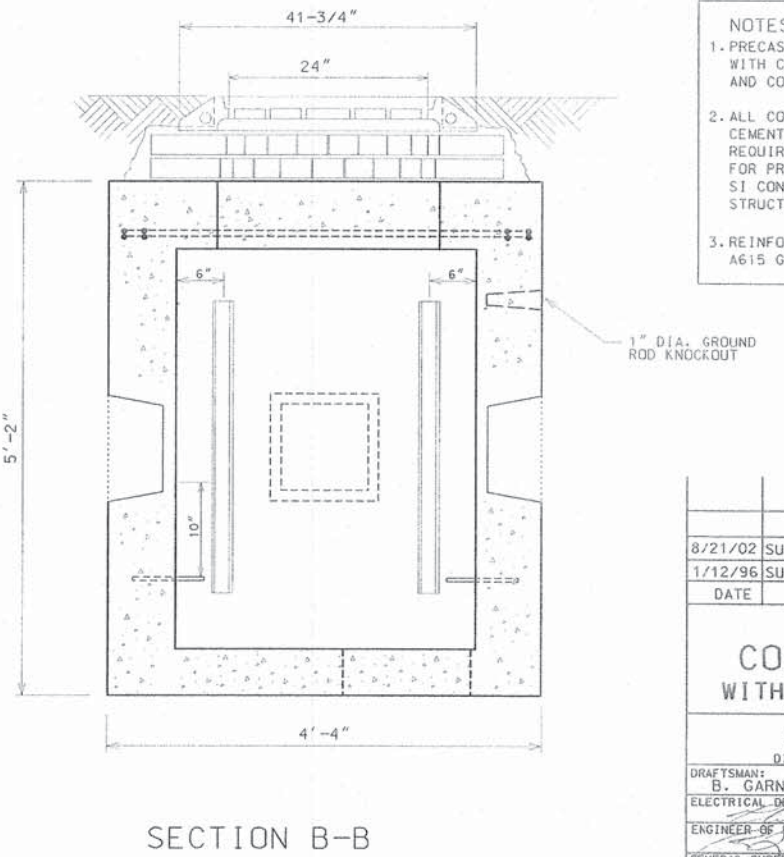
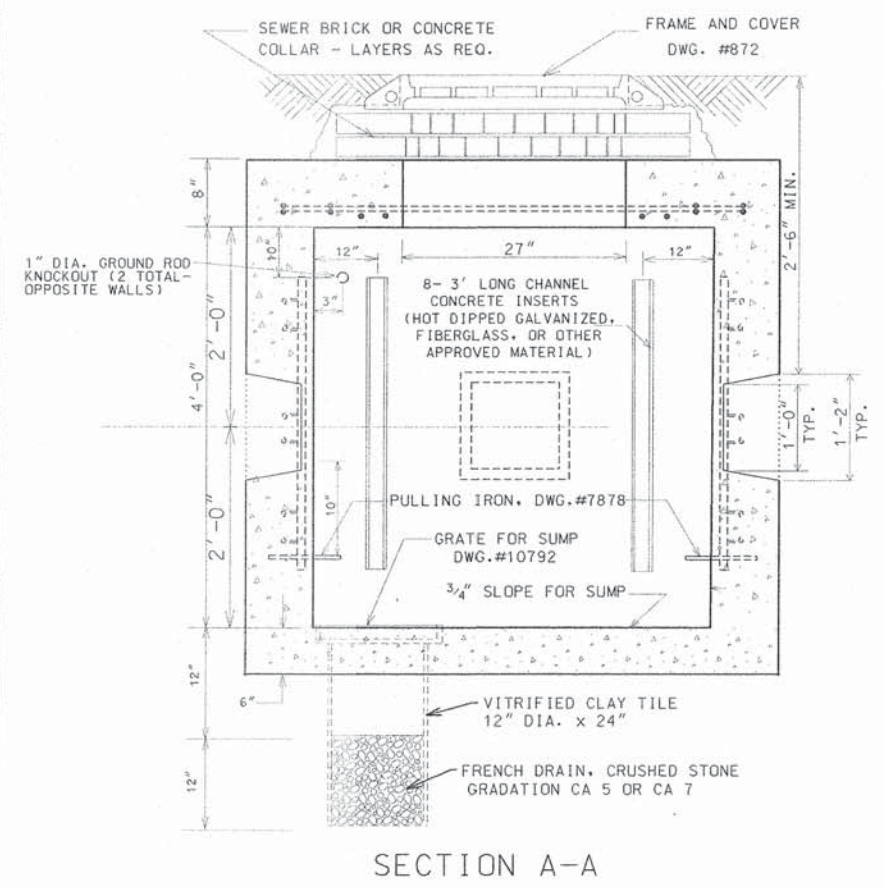
#5 REINFORCING BARS			
BAR	LENGTH	NO. OF RODS	TOTAL FT.
A	3'-4"	4	13'-4"
B	4'-0"	10	40'-0"

MATERIALS FOR ROOF ONLY	
CONCRETE	0.45 CU. YDS.
REINFORCING BARS #5	54'

DRG.	MATERIAL	CODE	SIZE	No. Req.
	FORM FOR MANHOLE	17-6674-6000 17-6648-5320	3x4x4	1
	CONDUIT END BELL		AS REQ.	
	TILE, SEWER	39-4038-3200	12"/24"	1
	SLAB BOLSTER		2"	20'
	BAR, REINFORCING	20-5472-9650	5/8" ø	54'
	TIE WIRE	13-9938-6106	#20GA	35'
7878	PULLING IRON	02-4483-6970	3/4" ø	2
	CONCRETE	05-3267-2940	3 CU.	YDS
	SEWER BRICK	05-1452-9720	STD.	50
10792	GRATE FOR SUMP	02-4368-7100	15" ø	1
	GROUND ROD	09-7796-9200	3/4"x10'	1
	GROUND ROD CLAMP	09-2636-3240	3/4"	1
	CRUSHED STONE	05-9057-5471	3/4"	TWO BAGS
872	MANHOLE FRAME	02-4299-5524	24"	1
872	MANHOLE COVER	02-4574-5040	24"	1
	CONC. CHANNEL INSERT	02-4574-5040	3"	8

**NOTES:**

1. PRECAST MANHOLES MUST BE PROVIDED WITH CHANNEL INSERTS, PULLING IRONS, AND CONDUIT KNOCK-OUTS.
2. ALL CONCRETE MUST BE PORTLAND CEMENT CONCRETE MEETING IDOT REQUIREMENTS FOR CLASS PC CONCRETE FOR PRE-CAST STRUCTURES, OR CLASS SI CONCRETE FOR CAST-IN-PLACE STRUCTURES.
3. REINFORCING BARS MUST MEET ASTM A615 GRADE 60.



8/21/02	SUPERCEDES DWG. 730 DATED JAN 12, 1996
1/12/96	SUPERCEDES DWG. 730 DATED NOV. 21, 1973
DATE	REVISION
<b>3' x 4' x 4'</b>	
<b>CONCRETE MANHOLE</b>	
<b>WITH 24" FRAME AND COVER</b>	
CITY OF CHICAGO DEPT. OF STREETS AND SANITATION BUREAU OF ELECTRICITY DIVISION OF ELECTRICAL ENGINEERING	
DRAFTSMAN: B. GARNSEY	CHIEF DRAFTSMAN: R. CARTER
ELECTRICAL DESIGN ENGINEER	ENGINEER: B. GARNSEY
ENGINEER OF ELECTRICITY	DRAWING NO.
GENERAL SUPERINTENDENT	<b>730</b>
DEPUTY COMMISSIONER	DATE: 8/21/02
SIZE: 17" x 22"	SCALE: NONE

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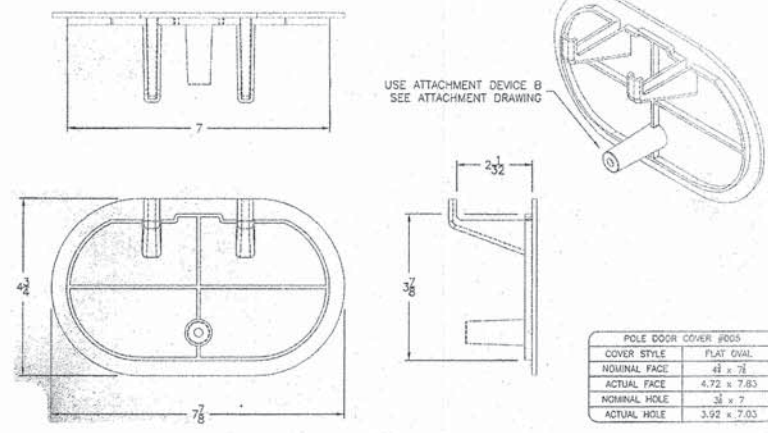
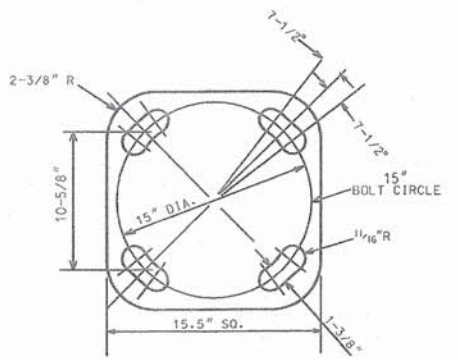
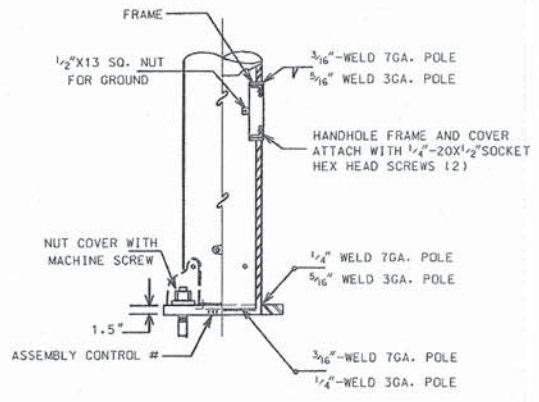
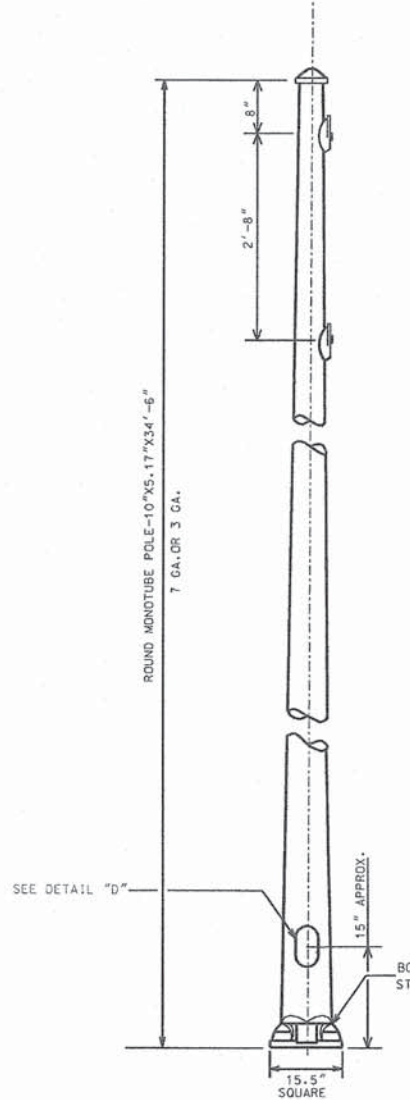
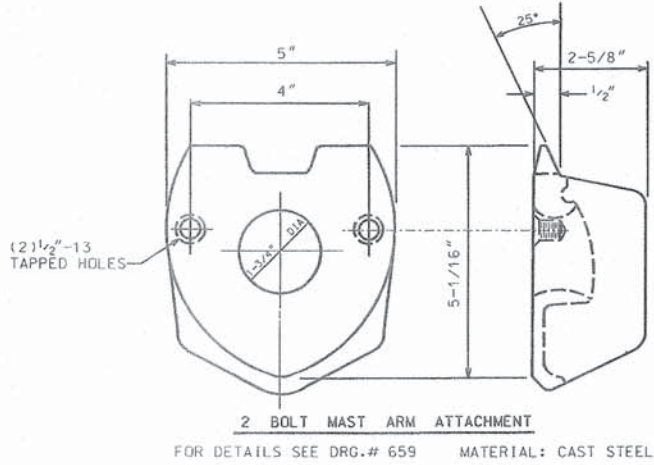
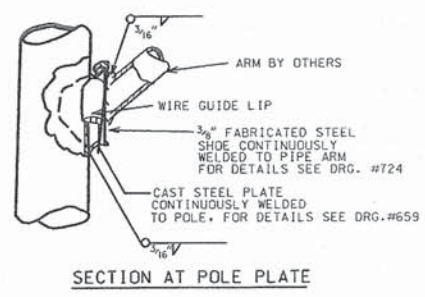
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

NORTH BRANCH BIKE TRAIL EXTENSION			
CDOT DETAILS			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	79
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FILE NAME: D:\C:\cra\FPD\_253827893\_NorthBranchEast\Roadway\Phase 2\_Engineering\Signal\Signal Details\Signal Details.dwg



POLE DOOR COVER WOOD	
COVER STYLE	PLAT GVAL
NOMINAL FACE	48 x 78
ACTUAL FACE	4.72 x 7.83
NOMINAL HOLE	38 x 7
ACTUAL HOLE	3.92 x 7.03

5.17"x10.0" STEEL/34'-6" POLE 7 OR 3 GAUGE		
CITY OF CHICAGO DEPT. OF STREETS AND SANITATION BUREAU OF ELECTRICITY DIVISION OF ELECTRICAL ENGINEERING		
DRAFTSMAN: <b>ROBERT IVY</b>	CHIEF DRAFTSMAN: <b>ROBERT CARTER</b>	ENGINEER: <b>RON POOL</b>
SUPERVISING ENGINEER: ELEC. DESIGN ENGR.		DWG. NO. <b>808</b>
ENGINEER OF ELECTRICITY:		10-03-01
GEN'L SUPT. OF ELECTRICITY:		
DEPUTY COMMISSIONER: <i>Dean S. Husphey</i>		



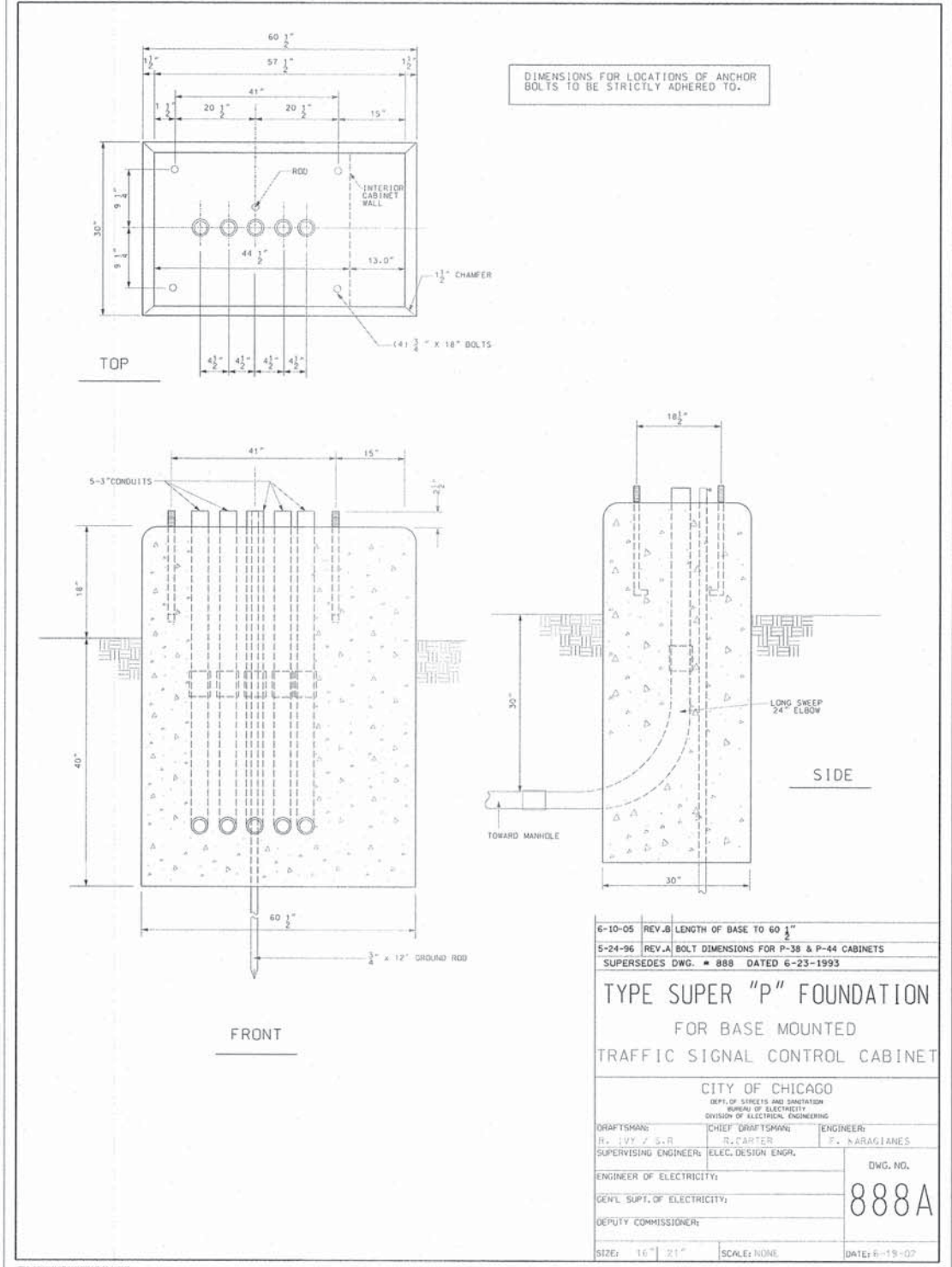
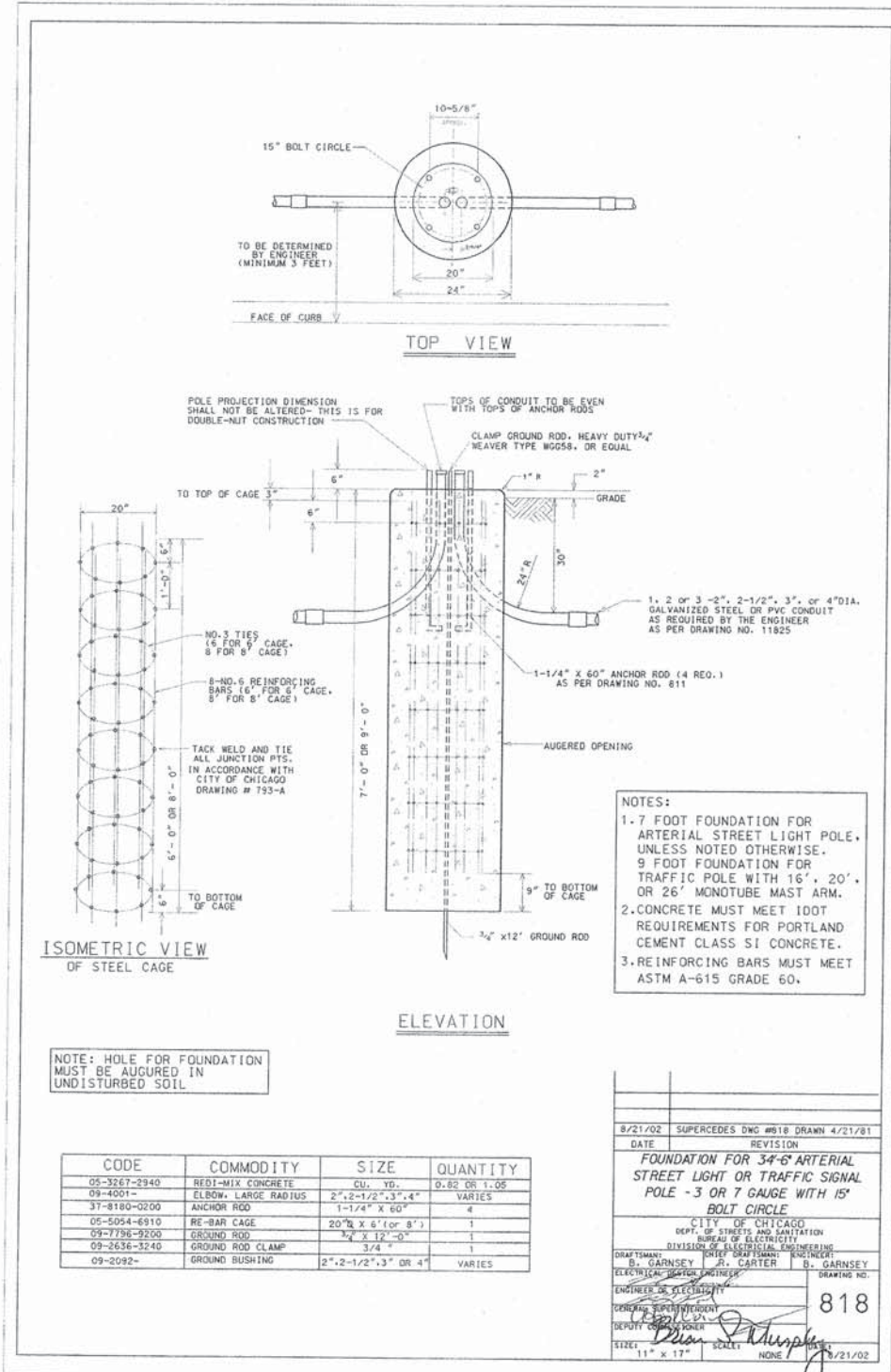
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PLOT DATE: 12/11/2014	CHECKED: -	REVISED: -
	DATE: -	REVISED: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION CDOT DETAILS			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	80
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





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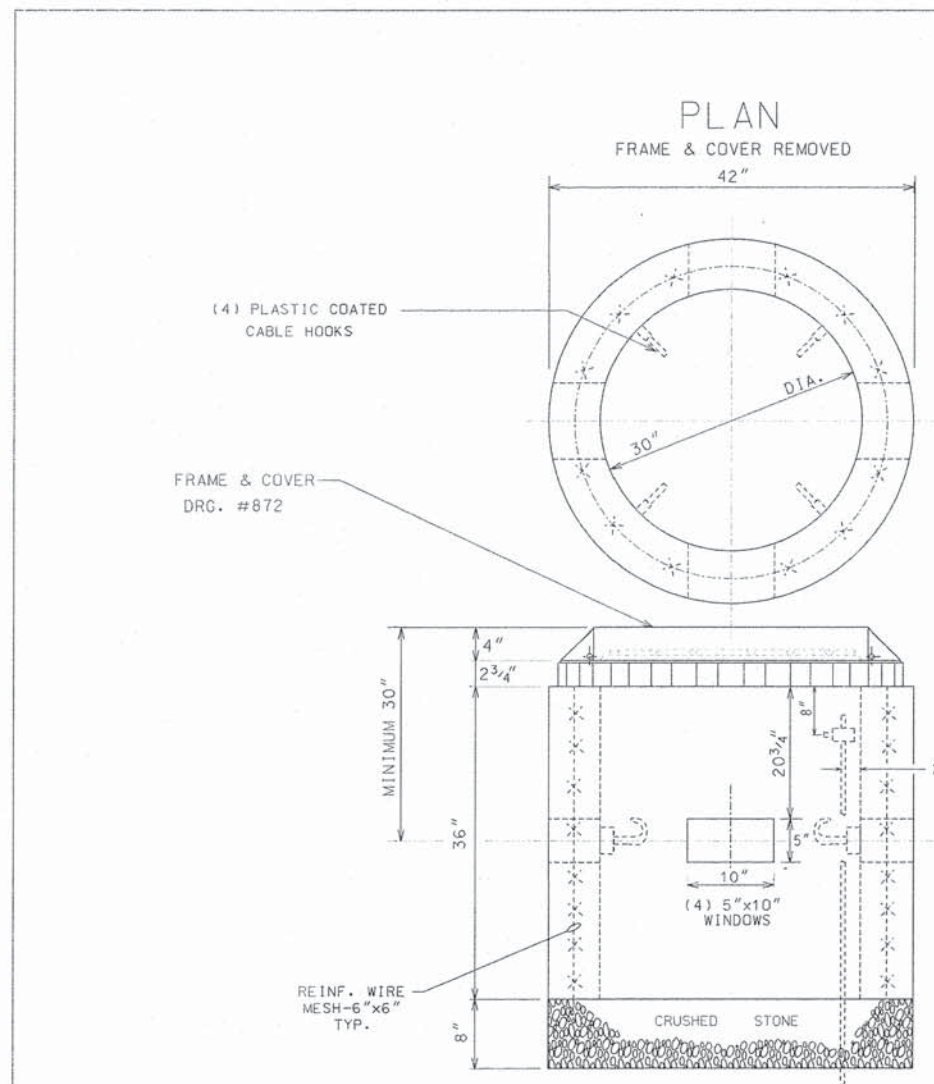
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
CDOT DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	81
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FILE NAME: G:\Cook\PP0\_28587889\_NorthBranchBikeTrail\Drawings\Phase 2 Engineering\Signal\Drawings\Phase 2 Engineering\Signal\Details\Signal\_Details\_Tdgn



COMPLETE COMMODITY CODE NO. 05-6610-5310M

CODE NO.	MATERIALS	SIZE	QUAN.
(1) 05-6610-5310	PRE-CAST HANDHOLE	30"X36"	1
(2) 05-9075-5470	STONE 3/4" CRJSHED	BAG	5
(2) 05-5082-5330	SOND TUBE	30"	1
(2) 05-5082-5342	SOND TUBE	42"	1
(2) 05-3267-2940	CONC. REDI-MIX	CU. YD.	1/2
(2) 57-0770-0000	6" X 6" MESH	36"X10'	1
05-1452-9720	BRICK		24
02-4299-5524	FRAME MANHOLE	24"	1
02-4574-5040	COVER, MANHOLE	24"	1
09-7796-9312	GROUND ROD	3/4"X12'	1
09-2630-3240	GROUND CLAMP		1

- (1) PRE-CAST HANDHOLE SHALL INCLUDE CABLE HOOKS AND CONDUIT KNOCKOUTS.
- (2) THESE ITEMS ARE FOR POURED-IN-PLACE HANDHOLES ONLY.

**CONSTRUCTION NOTES:**

- 1. 8" BED OF STONE FOR DRAINAGE.
- 2. ALL METALLIC CONDUITS ENTERING HAND-HOLE SHALL EXTEND MINIMUM 1" & MAXIMUM 3" INSIDE INNER WALL AND BE EQUIPPED WITH AN APPROVED TYPE OF THREADED GROUNDING BUSHING.

30" DIA. CONCRETE HANDHOLE

CITY OF CHICAGO

DATE: 12-8-95  
 DRAWN: (CAD)  
 DATE: 12-8-95

REVISION:

867



USER NAME: David.Landwehr  
 DESIGNED: - -  
 DRAWN: - -  
 CHECKED: - -  
 DATE: - -  
 PLOT SCALE: 1/8" = 1'-0"  
 PLOT DATE: 12/11/2014

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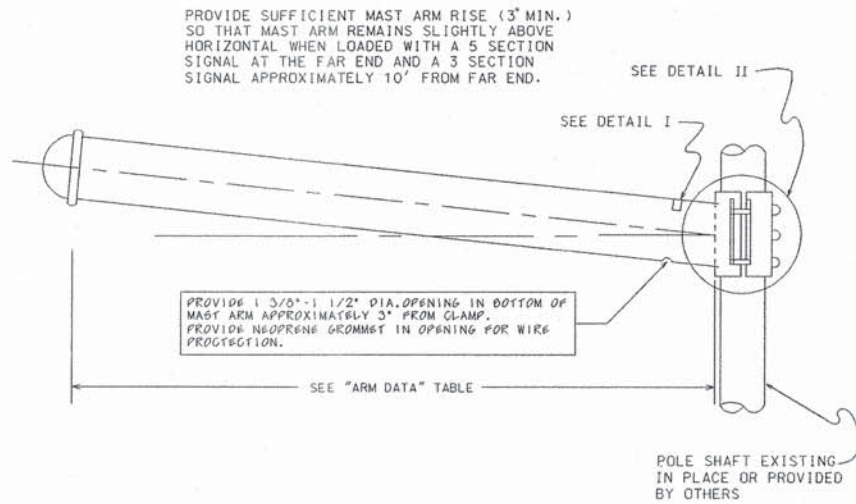
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 CDOT DETAILS

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

F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.  
 08-F3000-21-BT COOK 129 82  
 CONTRACT NO. 61A86  
 FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT

FILE NAME: G:\C:\proj\28392789\_NorthBranchE11\Roadway\Phase 2 Engineering\SIGNAL\SIGNAL\Signal Details.dwg



PROVIDE 1 3/8" - 1 1/2" DIA. OPENING IN BOTTOM OF MAST ARM APPROXIMATELY 3' FROM CLAMP. PROVIDE NEOPRENE GROMMET IN OPENING FOR WIRE PROTECTION.

SEE "ARM DATA" TABLE

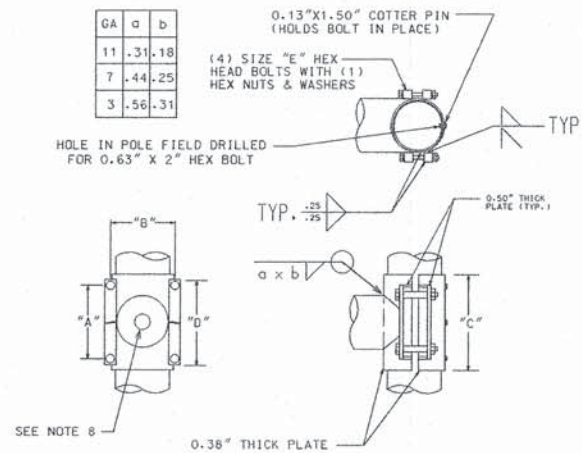
POLE SHAFT EXISTING IN PLACE OR PROVIDED BY OTHERS



I. D. TAG TO BE MOUNTED ON THE TOP OF THE POLE AS INDICATED, USING 2 "GRIP-NAIL" FASTENERS.

DETAIL I  
I. D. TAG

SIGNAL ARM ATTACHMENT DATA					
CLAMP RANGE	"A"	"B"	"C"	"D"	"E"
7.45" - 7.95"	7.25"	9.92"	10.80"	10.32"	1.00" X 7.50"
8.45" - 8.95"	9.00"	10.66"	13.06"	12.50"	1.00" X 8.00"
9.95" - 10.45"	10.25"	12.66"	15.30"	13.50"	1.25" X 8.50"



DETAIL II  
ARM ATTACHMENT

ARM DATA

CLAMP RANGE (INCHES)	POLE END (INCHES)	SIGNAL END (INCHES)	LENGTH (FEET)	GAUGE	WEIGHT (POUNDS)	TEST LOAD (POUNDS)	MAX. DEFLECTION (INCHES)
7.45-7.95	7.0	4.76	16	7	241	1700	6.5
7.45-7.95	7.0	4.20	20	7	274	1300	12.0
7.45-7.95	7.0	3.36	26	7	315	1000	24.0
8.45-8.95	8.0	3.80	30	7	409	1100	29.0
9.95-10.45	9.0	4.10	35	7	529	1200	36.0
9.95-10.45	9.0	3.40	40	7	559	1000	52.0
9.95-10.45	10.0	3.84	44	7		1200	57.0

NOTES:

- TRAFFIC SIGNAL ARM SHAFT ASTM DESIGNATION: A595 GRADE C, 60,000 PSI MINIMUM YIELD STRENGTH WITH A LINEAR TAPER -0.14"/FT.
- TRAFFIC SIGNAL ARM END CAP SECURED IN PLACE WITH 3 SET SCREWS AND 1 THRU ARM END BOLT. (PLATED HARDWARE)
- ALL THREADED FASTENERS TO BE GALVANIZED TO ASTM DESIGNATION: A153
- ALL VEHICULAR AND/OR PEDESTRIAN SIGNAL LIGHTS AND NECESSARY HARDWARE FOR ATTACHMENT TO BE FIELD LOCATED AND FURNISHED BY OTHERS.
- ALL ARM END CAPS AND ARM CLAMPS TO BE FULLY ASSEMBLED AND ATTACHED TO THE ARM PRIOR TO SHIPPING.
- ARM ASSEMBLY TO BE DEGREASED; CLEANED; CHEMICALLY PRETREATED; GIVEN AN EXTERIOR THERMOSETTING POLYESTER POWDER COAT; AND AN INTERIOR THERMOPLASTIC HYDROCARBON RESIN POWDER COAT. ALL PAINTING TO BE IN ACCORDANCE WITH SPECIFICATION 1454, SECTION 8, "PAINTING".
- MAST ARM SHALL BE TESTED IN ACCORDANCE WITH SPECIFICATION 1454, SECTION 9 WITH TEST VALUES AS SHOWN ON THE "ARM DATA" TABLE.
- HOLE IN CLAMP TO BE 4.0" (MIN.). HOLE TO BE GROUND SMOOTH AND DEBURRED TO PROVIDE A SMOOTH WIRE ENTRY FROM POLE TO MAST ARM.

B	10-29-02	REFERENCES SPEC. 1454
A	8-6-95	WIRE OPENING ON MAST ARM
DATE REVISION		
SUPERSEDES Dwg. DATED DEC. 1991		
STEEL TRAFFIC SIGNAL MAST ARM-MONOTUBE		
CITY OF CHICAGO		
DEPT. OF STREETS AND SANITATION DIVISION OF ELECTRICAL ENGINEERING		
DRAWN BY	CHIEF DRAFTSMAN	ENGINEER
R. IVY	ROBERT CARTER	RON POOL
SUPERVISING ENGINEER		
ENGINEER		
DEPT. CHIEF OF ELECTRICAL		
DEPT. CHIEF OF ELECTRICAL		
SCALE: 1" = 1'-0"	DATE: DEC. 1994	870



USER NAME = David.Landwehr  
 PLOT SCALE = 10.0000" / 1"  
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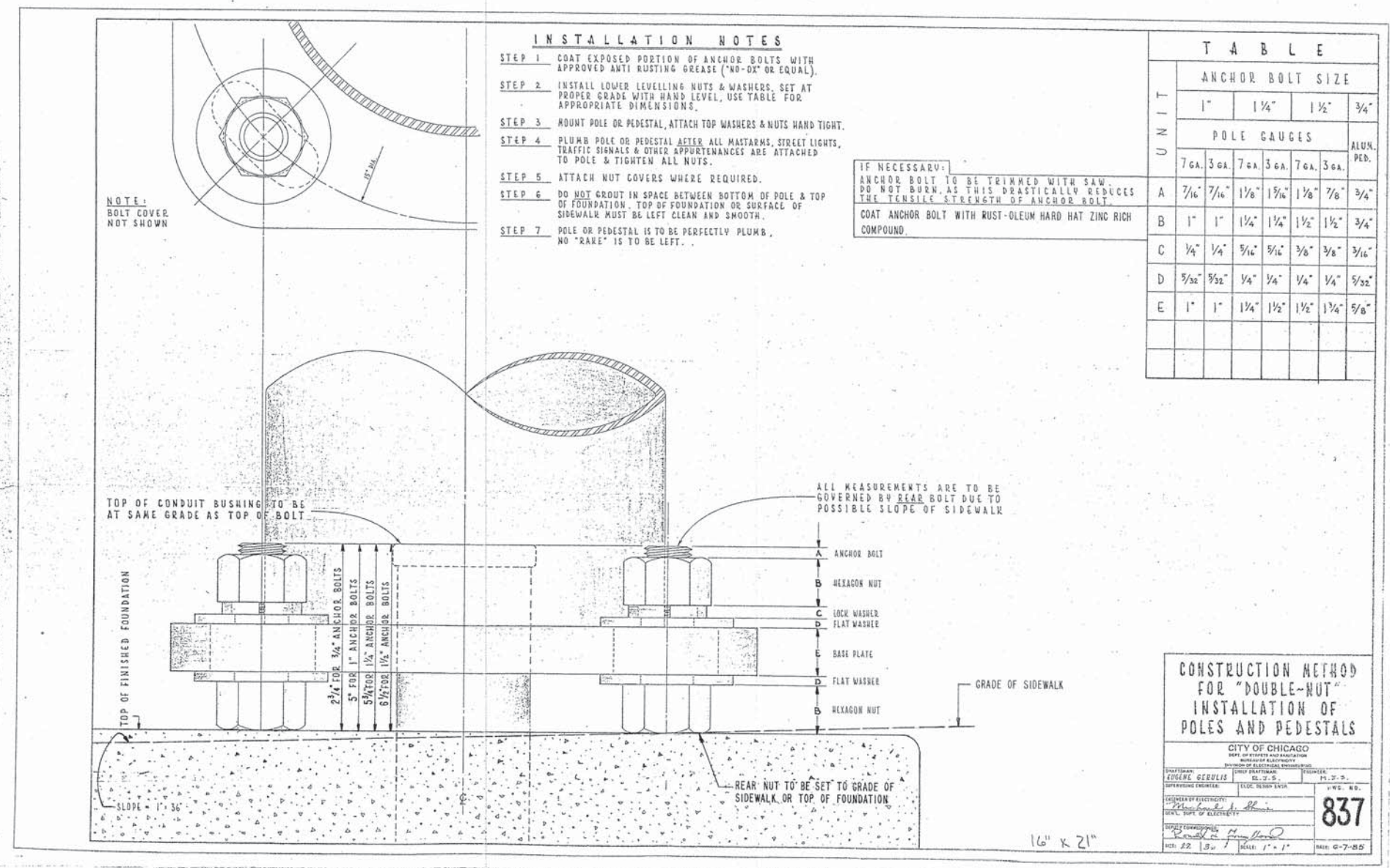
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
CDOT DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	83
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FILE NAME: D:\Cook\FD\_20387381\_NorthBranch\Roadway\Phase 2 Engineering\CDOT Standards\CDOT\_Std\_4.dgn



- INSTALLATION NOTES**
- STEP 1 COAT EXPOSED PORTION OF ANCHOR BOLTS WITH APPROVED ANTI RUSTING GREASE ("NO-OX" OR EQUAL).
  - STEP 2 INSTALL LOWER LEVELLING NUTS & WASHERS. SET AT PROPER GRADE WITH HAND LEVEL, USE TABLE FOR APPROPRIATE DIMENSIONS.
  - STEP 3 MOUNT POLE OR PEDESTAL, ATTACH TOP WASHERS & NUTS HAND TIGHT.
  - STEP 4 PLUMB POLE OR PEDESTAL AFTER ALL MASTARMS, STREET LIGHTS, TRAFFIC SIGNALS & OTHER APPURTENANCES ARE ATTACHED TO POLE & TIGHTEN ALL NUTS.
  - STEP 5 ATTACH NUT COVERS WHERE REQUIRED.
  - STEP 6 DO NOT GROUT IN SPACE BETWEEN BOTTOM OF POLE & TOP OF FOUNDATION. TOP OF FOUNDATION OR SURFACE OF SIDEWALK MUST BE LEFT CLEAN AND SMOOTH.
  - STEP 7 POLE OR PEDESTAL IS TO BE PERFECTLY PLUMB. NO "KARE" IS TO BE LEFT.

IF NECESSARY:  
ANCHOR BOLT TO BE TRIMMED WITH SAW. DO NOT BURN, AS THIS DRASTICALLY REDUCES THE TENSILE STRENGTH OF ANCHOR BOLT.  
COAT ANCHOR BOLT WITH RUST-OLEUM HARD HAT ZINC RICH COMPOUND.

**T A B L E**

U N I T	ANCHOR BOLT SIZE				ALUM. PER.	
	1"	1 1/4"	1 1/2"	3/4"		
	POLE GAUGES					
	7 ga.	3 ga.	7 ga.	3 ga.		
A	7/16"	7/16"	1 1/8"	1 3/8"	7/8"	3/4"
B	1"	1"	1 1/4"	1 1/4"	1 1/2"	3/4"
C	3/4"	3/4"	5/8"	5/8"	3/8"	3/16"
D	5/32"	5/32"	1/4"	1/4"	1/4"	5/32"
E	1"	1"	1 1/4"	1 1/2"	1 3/4"	5/8"

**CONSTRUCTION METHOD FOR "DOUBLE-NUT" INSTALLATION OF POLES AND PEDESTALS**

CITY OF CHICAGO  
DEPT. OF STREETS AND SANITATION  
DIVISION OF ELECTRICAL ENGINEERING

DESIGNED BY: EDGARD GERLIS, EL. ENGR. No. 14,375, P.E. No. 08-00000000

DATE: 12/11/2014

**837**

SCALE: 1" = 1'



USER NAME: David.Landwehr  
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 PLOT DATE: 12/11/2014

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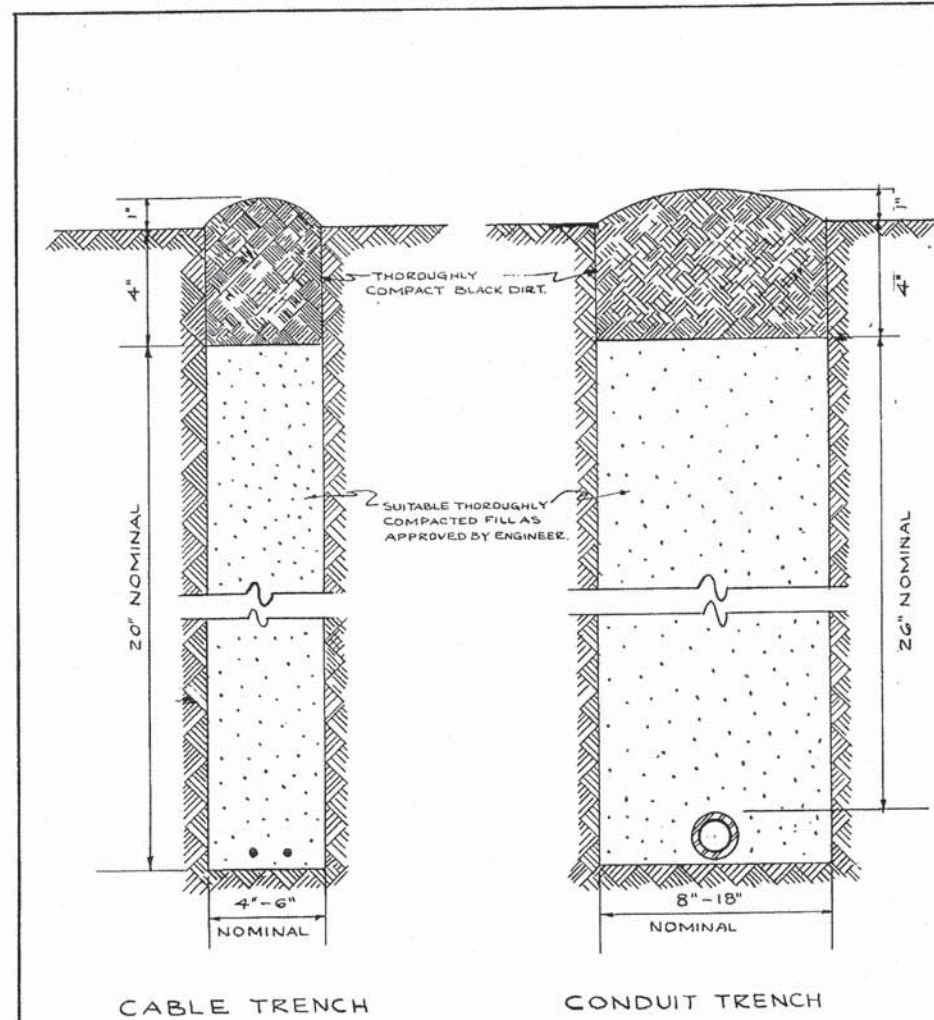
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTH BRANCH BIKE TRAIL EXTENSION  
 CDOT DETAILS**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61A86				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



CABLE TRENCH

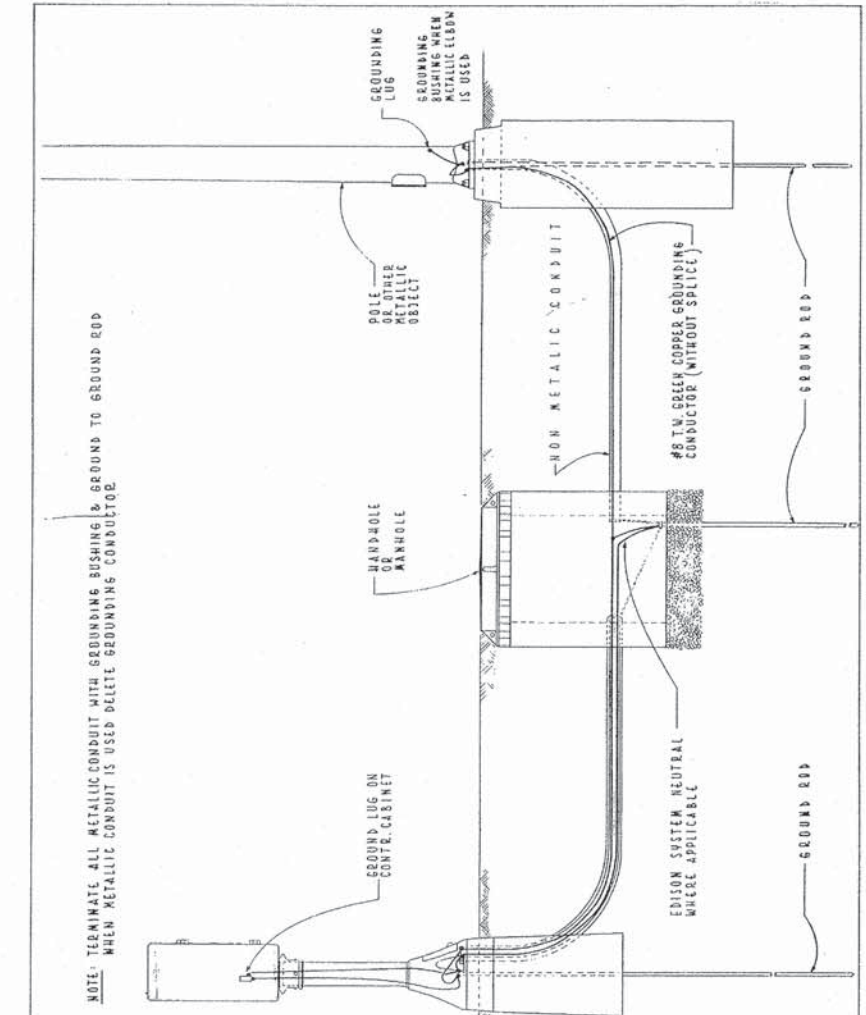
CONDUIT TRENCH

**NOTE**  
 EXCESS SOIL FROM TRENCH TO BE COMPLETELY REMOVED FROM SITE AS SOON AS PRACTICABLE.  
 BLACK DIRT TO BE TAMPED & THOROUGHLY COMPACTED AS SHOWN.

STANDARD METHOD FOR BACKFILLING CABLE & CONDUIT TRENCHES IN SODDED PARKWAY & LAWNS			
CITY OF CHICAGO			
DEPT. OF STREETS & SANITATION			
DIVISION OF ELECTRICAL ENGINEERING			
REVISION	DATE	BY	CHKD.
A			
B			
C			
D			
E			
F			
G			
H			

DRAWN	CHECKED	ENGINEER
W. E. HARP	M. J. Line	J. O'CONNOR
ENG. IN CHARGE	DRG. NO.	
D. D. Bubby	579	
SUPT. OF CONET.		
W. J. Kelly		
DATE	SCALE	DATE
7-14-61	N	



**TYPICAL GROUNDING METHODS FOR BUREAU OF ELECTRICITY EQUIPMENT**

CITY OF CHICAGO  
 DEPT. OF STREETS & SANITATION  
 BUREAU OF ELECTRICITY  
 DIVISION OF ELEC. ENGINEERING

REVISION	DRAWN	CHECKED	ENGINEER
A	E. BERULIS	M. SHINE	J. O'CONNOR
B			
C			
D			
E			
F			

DATE: 5-12-76

736

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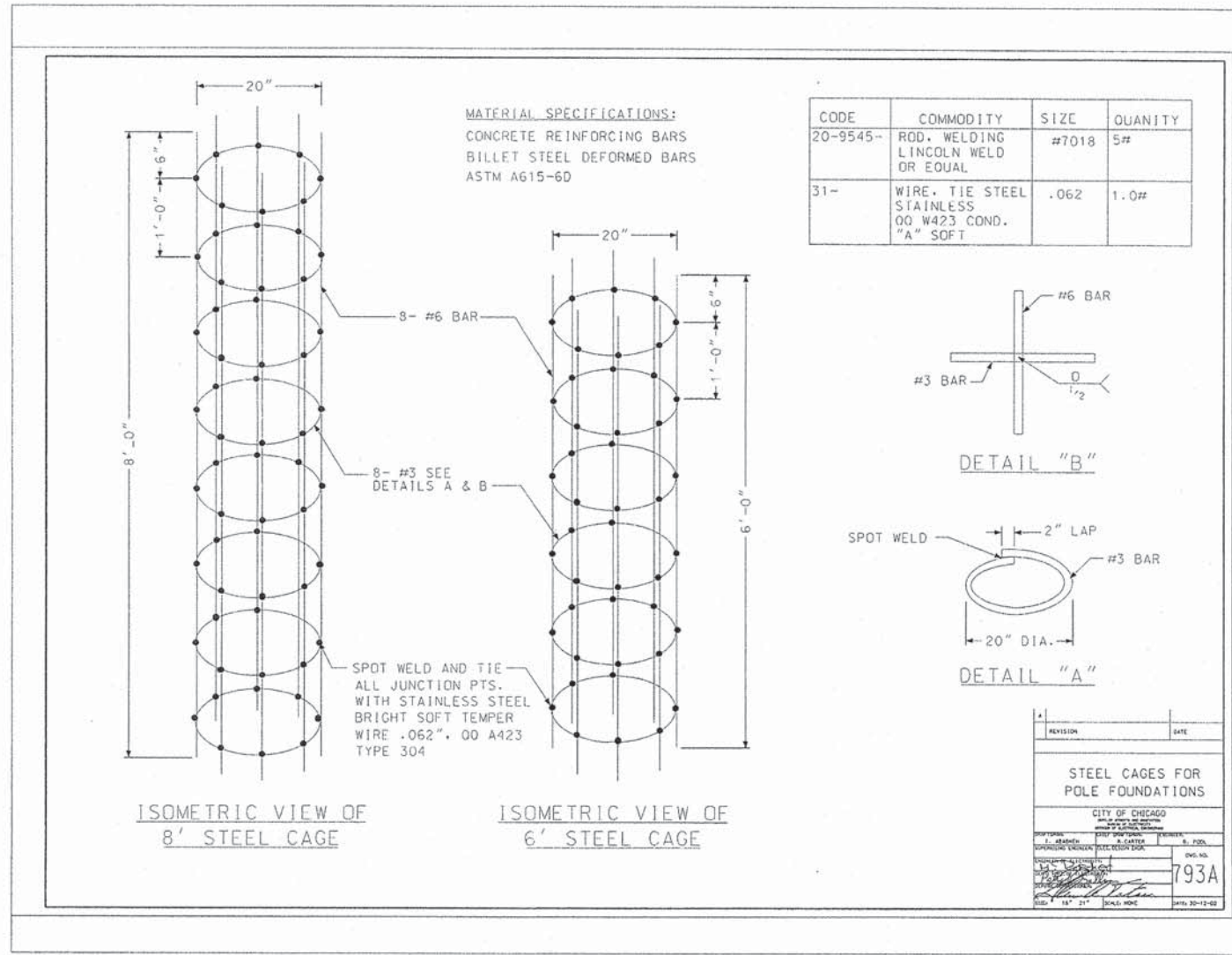
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 CDOT DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	85
CONTRACT NO. 61A86				
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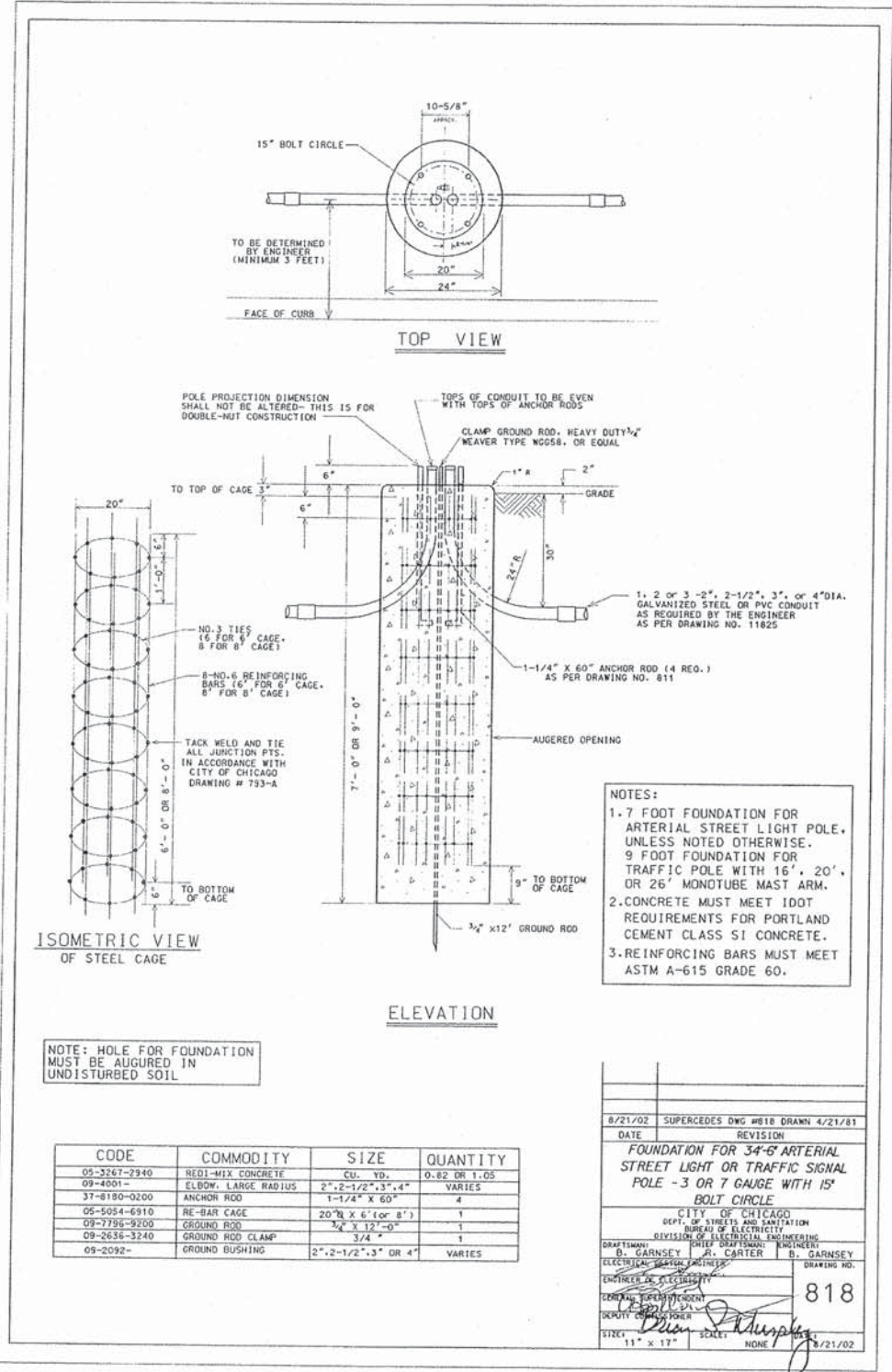


REVISION	DATE

STEEL CAGES FOR POLE FOUNDATIONS

CITY OF CHICAGO  
 DEPT. OF STREET AND SANITATION  
 BUREAU OF ELECTRICITY

793A



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DRAWN - PMV	REVISED -
CHECKED - NPP	REVISED -
DATE - 10/20/14	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
 CCDOT DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	86

CONTRACT NO. 61A86  
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

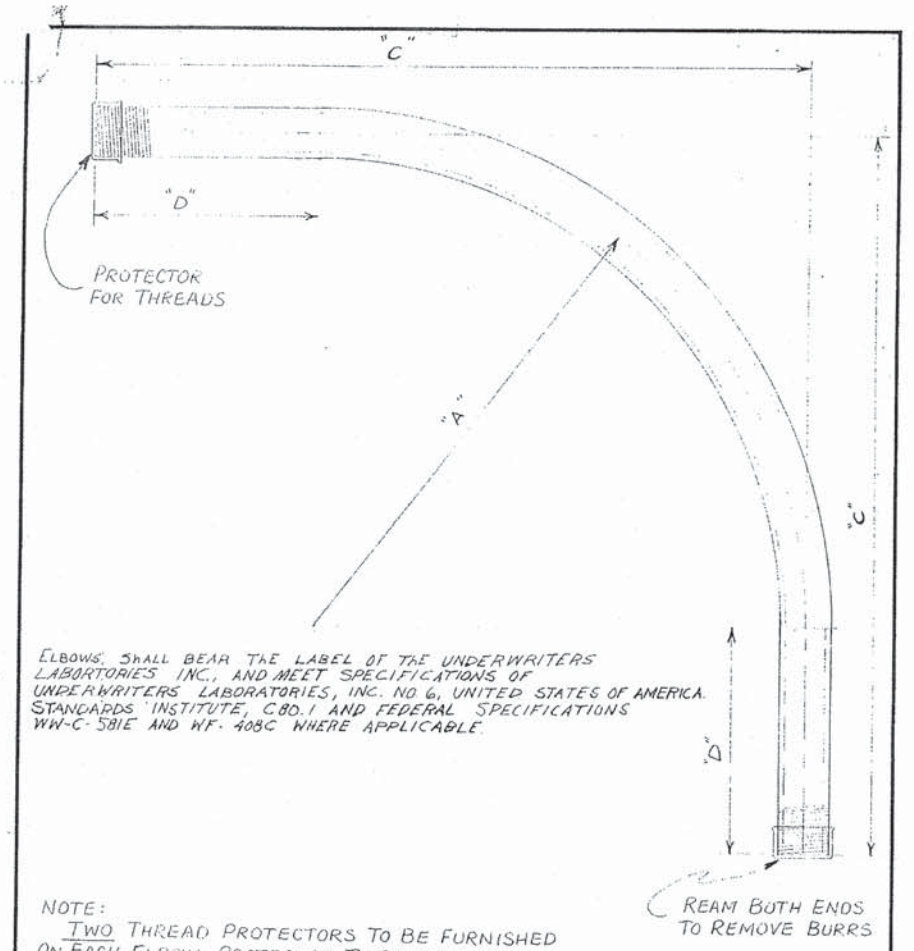
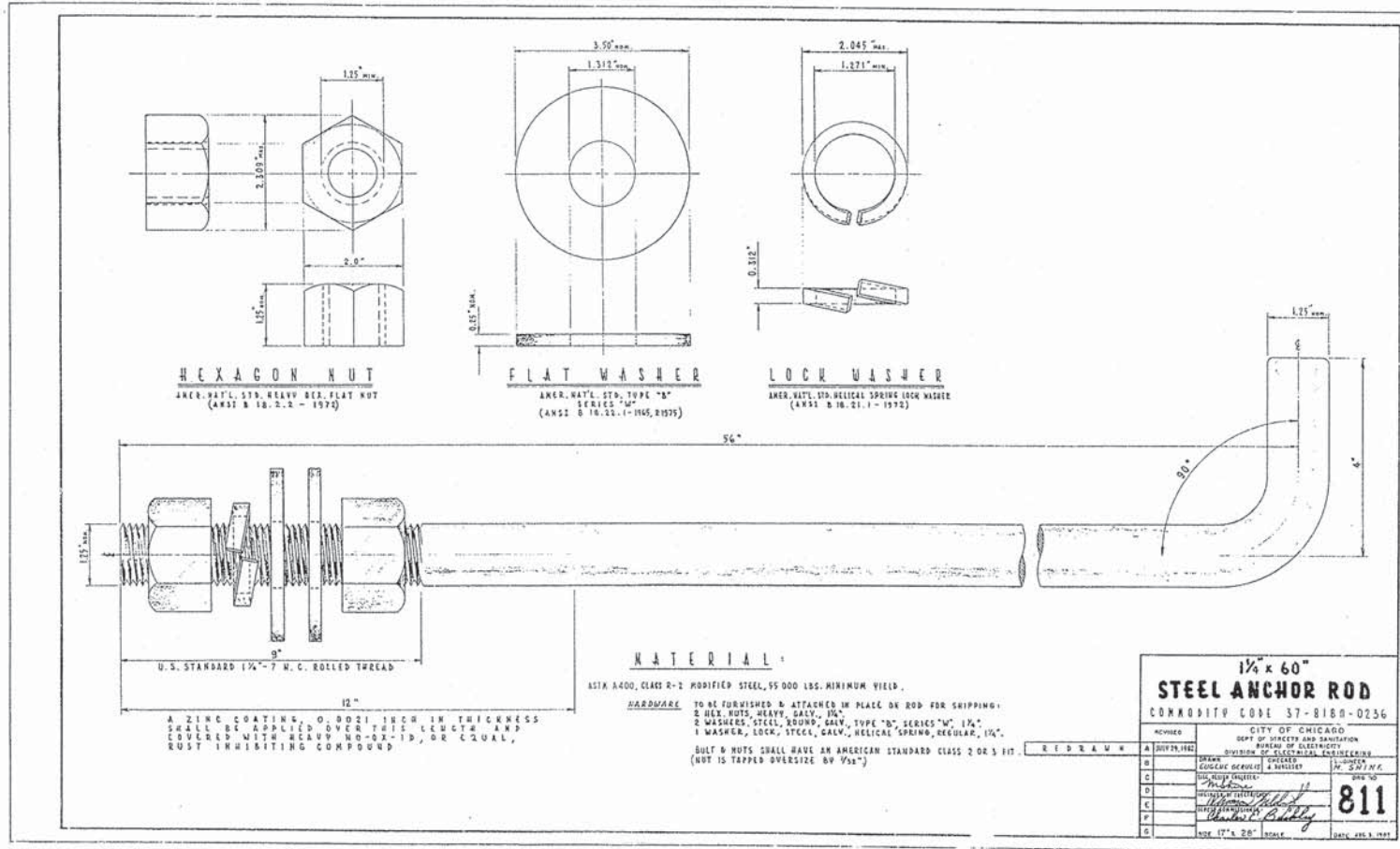


TABLE OF DIMENSIONS

CONDUIT SIZE	DIMENSIONS			COMMODITY CODE
	A	C	D	
1 1/4"	24"	35"	11"	09-4001-0510
1 1/2"	24"	35"	11"	09-4001-0520
2"	24"	35"	11"	09-4001-4126
2 1/2"	24"	35"	11"	09-4001-4128
3"	24"	35"	11"	09-4001-4230
4"	24"	35"	11"	09-4001-0000

**SPECIFICATIONS REVISED**

A REVISED DIMENSIONS ON 3" & 4" CONDUIT L.P.

**ELBOW, CONDUIT, RIGID GALVANIZED STEEL, LARGE RADIUS**

REVISIONS:

REVISED	DATE	DESCRIPTION
A	7-22-71	
B	4-3-79	
C		
D		
E		
F		
G		

**CITY OF CHICAGO**  
DEPT. OF STREETS AND SANITATION  
BUREAU OF ELECTRICITY  
DIVISION OF ELECTRICAL ENGINEERING

DRAWN: LON RUDY  
CHECKED: M.S.  
ENGINEER: M. SHINE  
ORG. NO.: 11825  
DEPUTY COMM. DATE: 6-2-71  
SCALE: 3/16"

FILE NAME: G:\Cask\FD\28397289\_NorthBranchEx\Drawings\Phase 2 Engineering\CDOT Standards\CDOT Std. Draw



USER NAME: David.Landwehr  
DESIGNED: PMV  
DRAWN: PMV  
CHECKED: NPP  
DATE: 10/20/14

DESIGNED: PMV  
DRAWN: PMV  
CHECKED: NPP  
DATE: 10/20/14

REVISIONS:

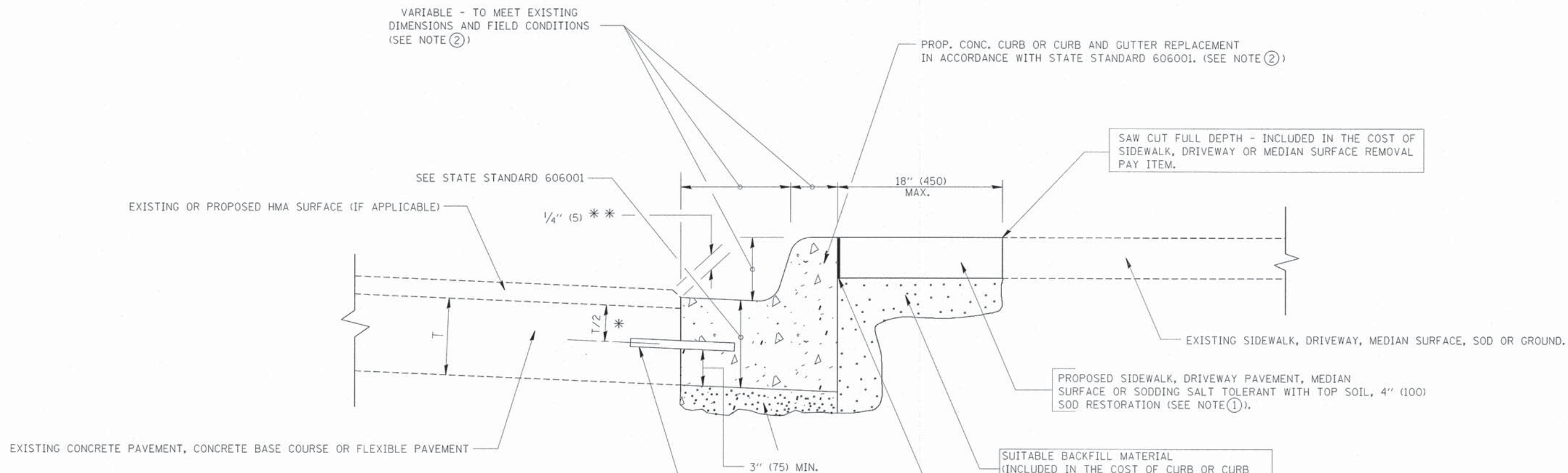
NO.	DATE	DESCRIPTION

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH BRANCH BIKE TRAIL EXTENSION  
CDOT DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	87
CONTRACT NO. 61A86				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



\* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

\*\* IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

- NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY. SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY.
- ② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED
- ③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
- ④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
- ⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑥ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.
- ⑧ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

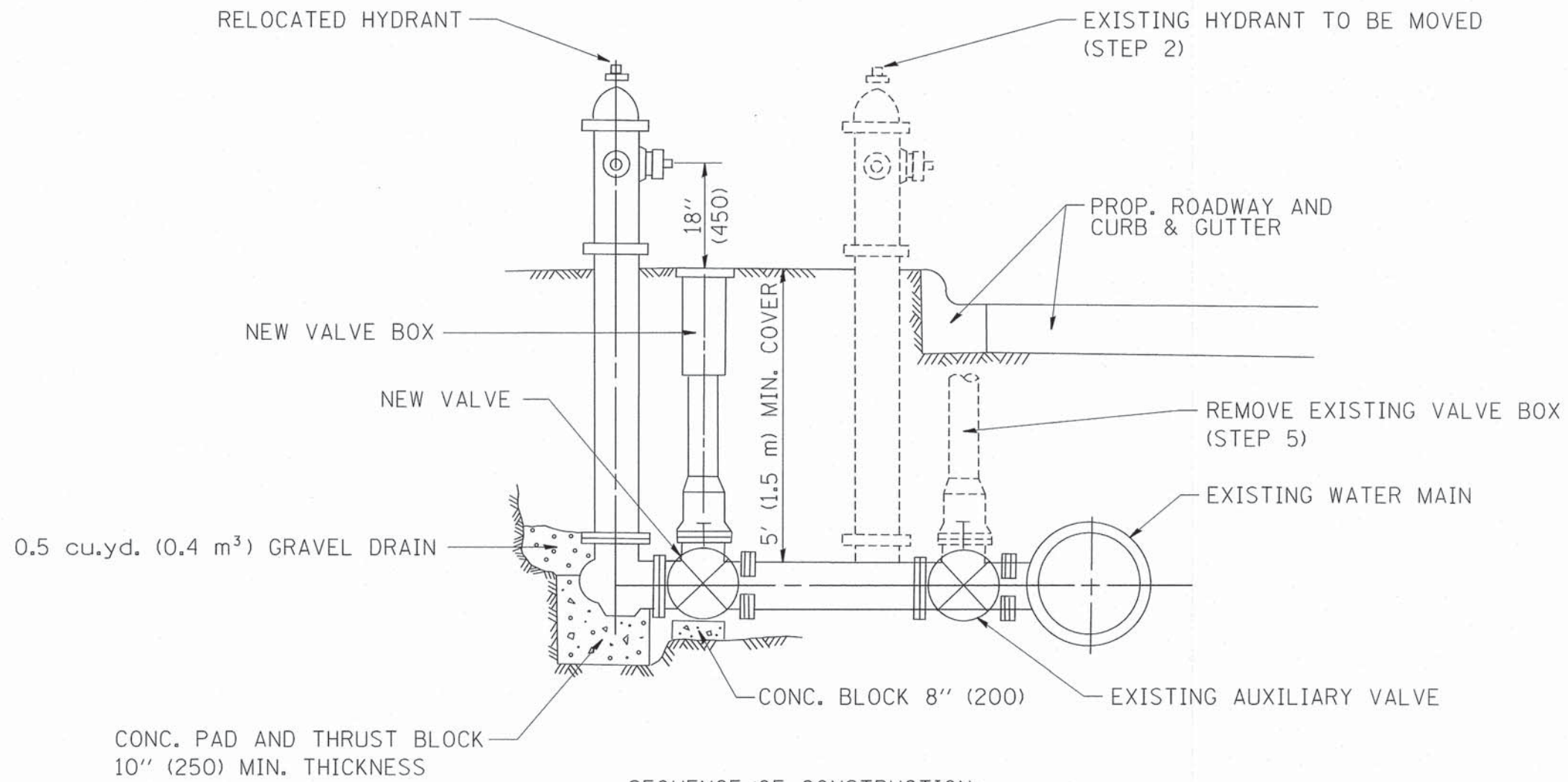
**BASIS OF PAYMENT:**  
 THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

## CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

FILE NAME =	USER NAME = drivakosgn	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT</b>	F.A. -	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
cs:\pwork\pwork\drivakosgn\d8188315\bd24.dgn		DRAWN -	REVISED - A. ABBAS 03-21-97			08-F3000-21-BT	COOK	129	88	
		CHECKED -	REVISED - M. GOMEZ 01-22-01			BD600-06 (BD-24)			CONTRACT NO. 61A86	
		DATE - 03-11-94	REVISED - R. BORO 12-15-09			SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.
						FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				





SEQUENCE OF CONSTRUCTION:

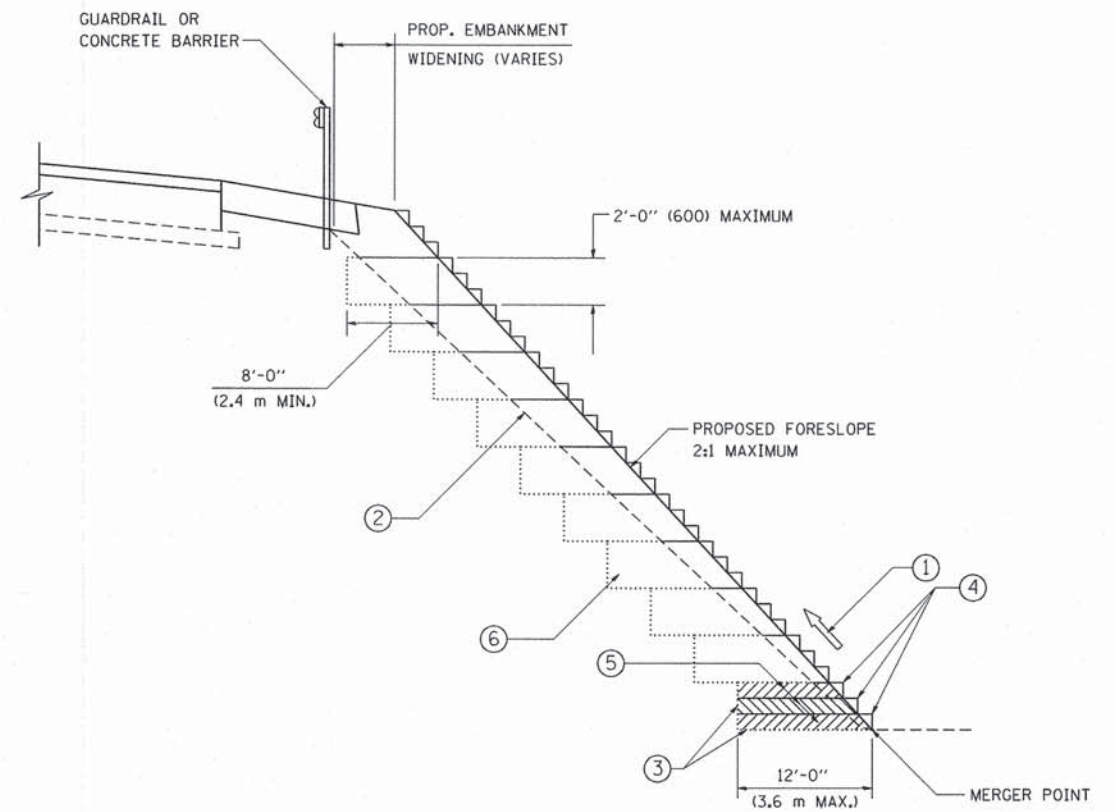
1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING HYDRANT.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

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

FIRE HYDRANT TO BE MOVED

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

FILE NAME = W:\diststd\22x34\bd36.dgn	USER NAME = geglennob	DESIGNED -	REVISED - R. SHAH 09-09-94	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FIRE HYDRANT TO BE MOVED</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000 "/>											



TYPICAL BENCHING DETAIL  
FOR EMBANKMENT

**NOTES:**

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

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

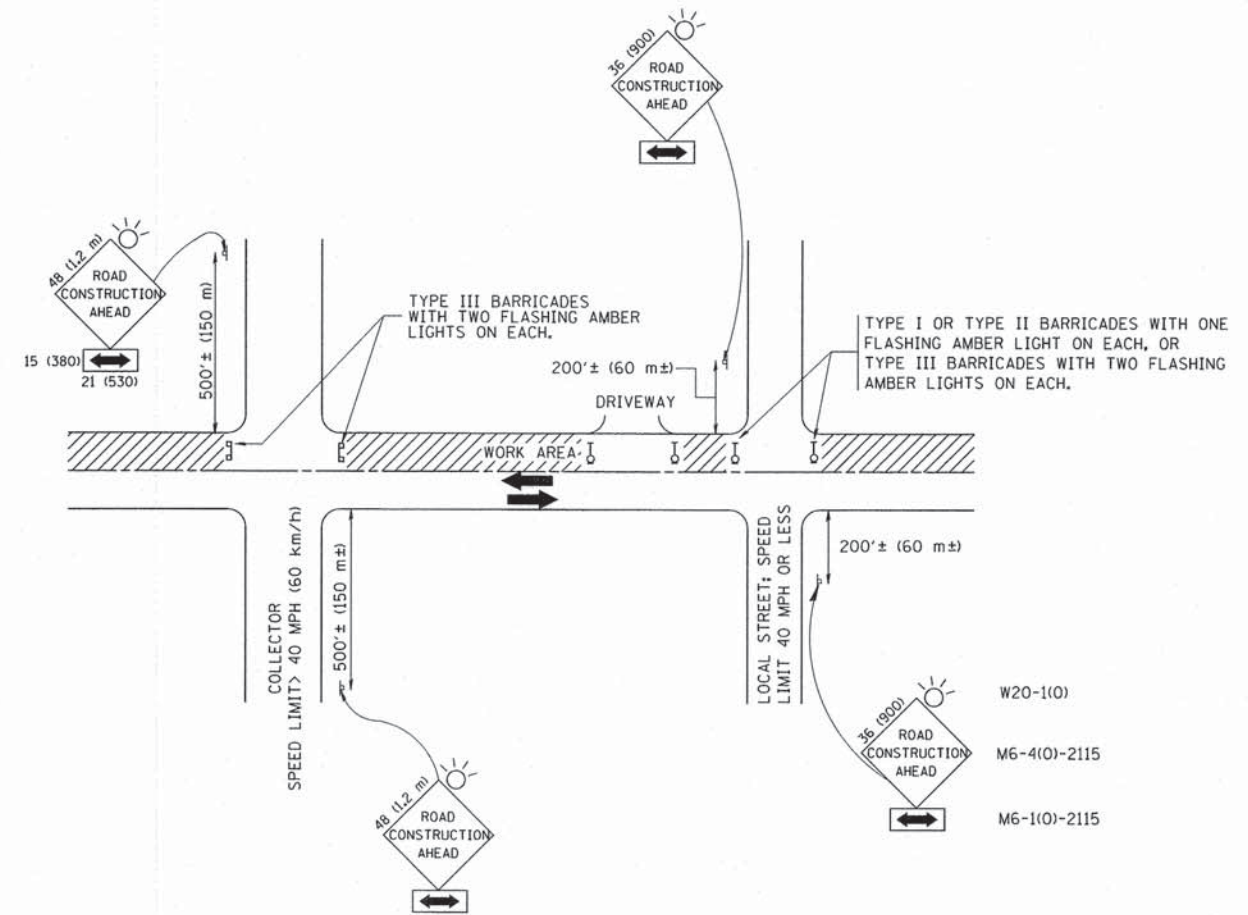
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		DRAWN - CADD	REVISED -
		CHECKED - S.E.B.	REVISED -
		DATE - 06-16-04	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BENCHING DETAIL  
FOR EMBANKMENT WIDENING**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	90
BD-51			CONTRACT NO. 61A86	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

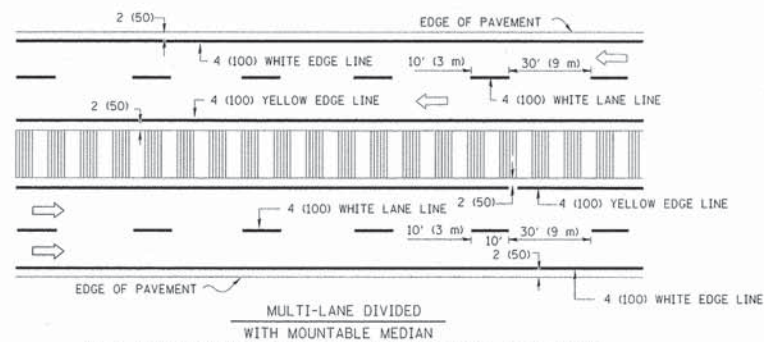
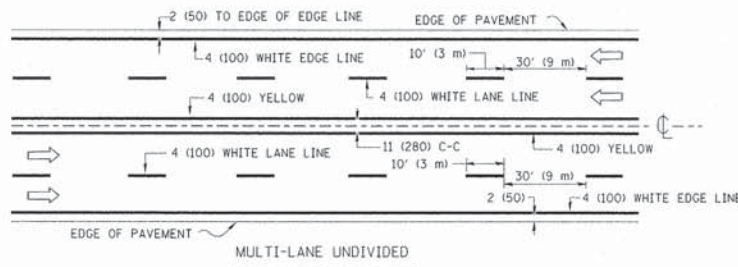
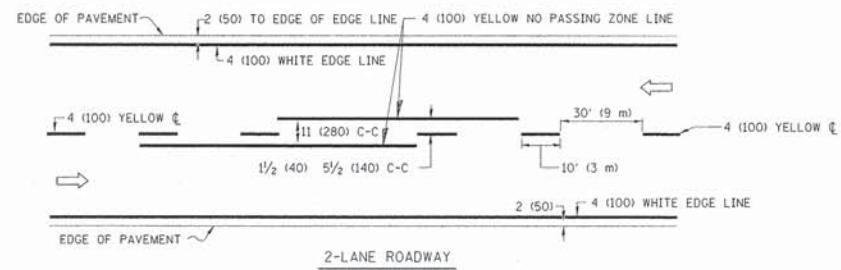
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		CHECKED -	REVISED - A. HOUSEH 10-15-96
		DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

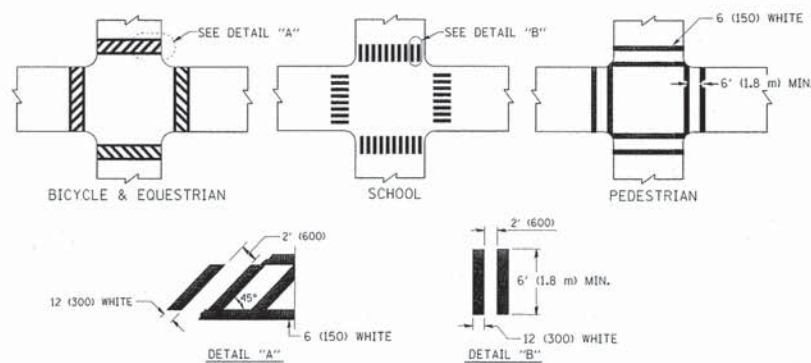
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	91
TC-10			CONTRACT NO. 61A86	
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				

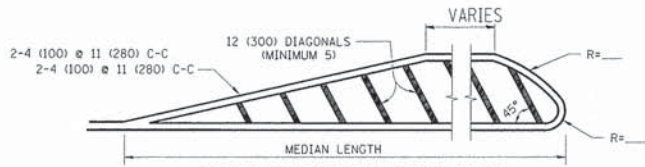
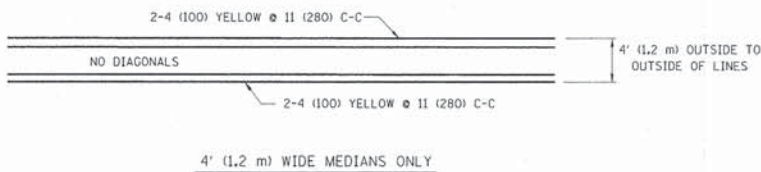


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

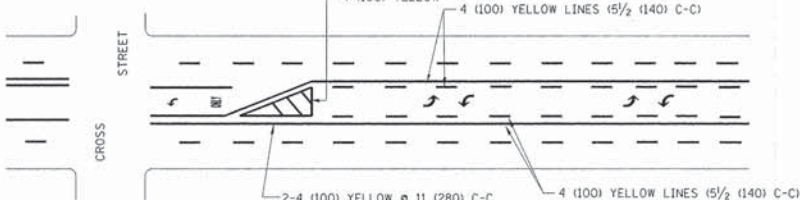


TYPICAL CROSSWALK MARKING

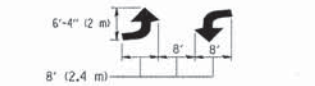


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.  
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

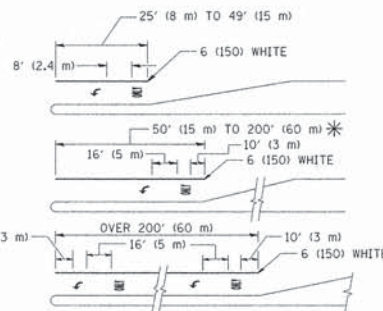


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

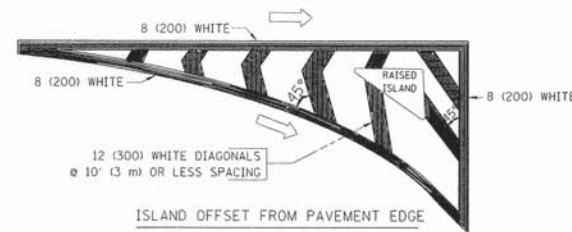
TYPICAL PAINTED MEDIAN MARKING



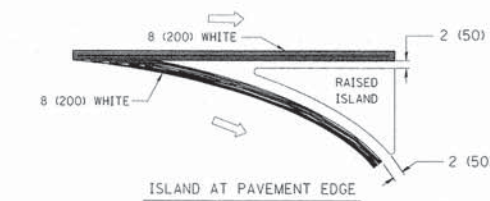
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)  
 \* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15' 6" (4.7 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C 30 MPH (50 km/h) TO 45MPH (70 km/h) 150' (45 m) C-C (OVER 45MPH (70 km/h))

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

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

FILE NAME =	USER NAME = drvakosgn	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
er:\pwork\p\dot\drvakosgn\d0188315\to	3.dgn	DRAWN -	REVISED -C. JUCIUS 09-09-09
	PLOT SCALE = 50.000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE = 03-19-90	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

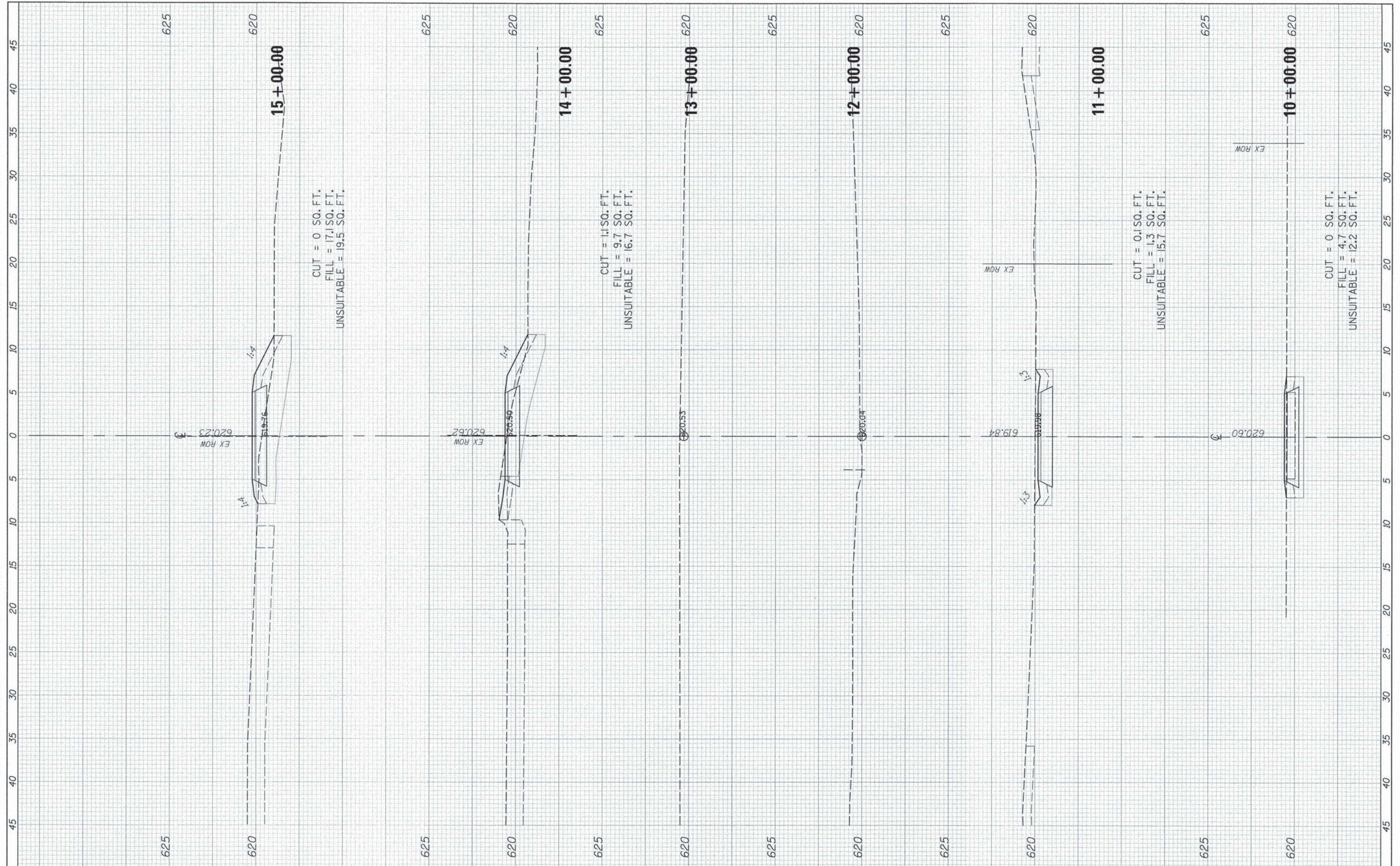
DISTRICT ONE  
TYPICAL PAVEMENT MARKINGS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	92
TC-13		CONTRACT NO. 61A86		
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				

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

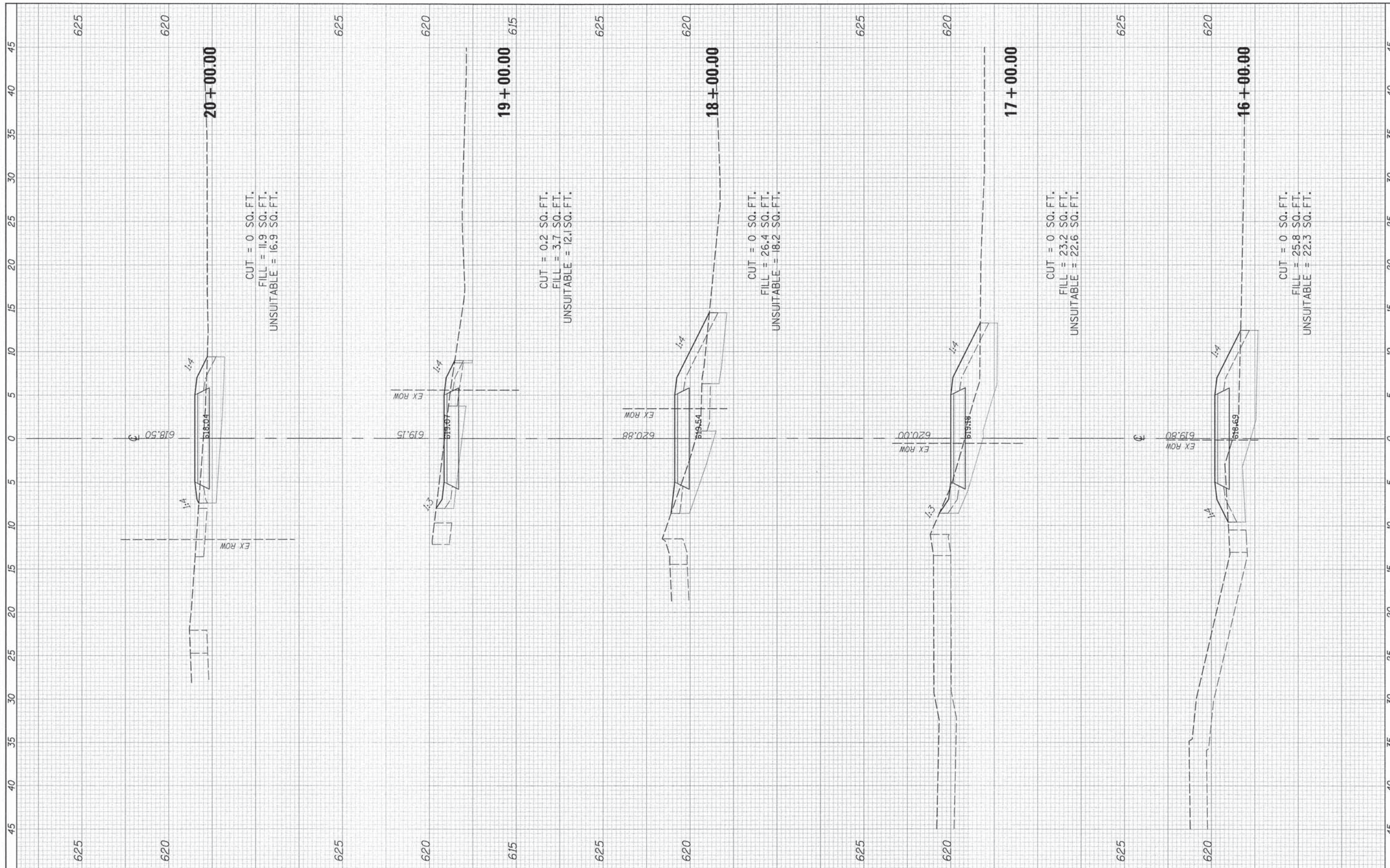
ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	AREAS CHECKED		



FILE NAME =	USER NAME = David.Landwehr	DESIGNED =	REVISED =	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION CROSS SECTIONS</b>	SCALE:	SHEET 1 OF 37 SHEETS STA. 10+00.00 TO STA. 15+00.00	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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#MODEL#	PLOT DATE = 12/5/2014	CHECKED = DDL	REVISED =						CONTRACT NO. 61A86			
		DATE = 10/20/14	REVISED =						ILLINOIS FED. AID PROJECT			

FINAL SURVEY	BY	DATE
NOTE BOOK NO.		
AREAS CHECKED		

ORIGINAL SURVEY	BY	DATE
NOTE BOOK NO.		
AREAS CHECKED		



CUT = 0 SQ. FT.  
FILL = 11.9 SQ. FT.  
UNSUITABLE = 16.9 SQ. FT.

CUT = 0.2 SQ. FT.  
FILL = 3.7 SQ. FT.  
UNSUITABLE = 12.1 SQ. FT.

CUT = 0 SQ. FT.  
FILL = 26.4 SQ. FT.  
UNSUITABLE = 18.2 SQ. FT.

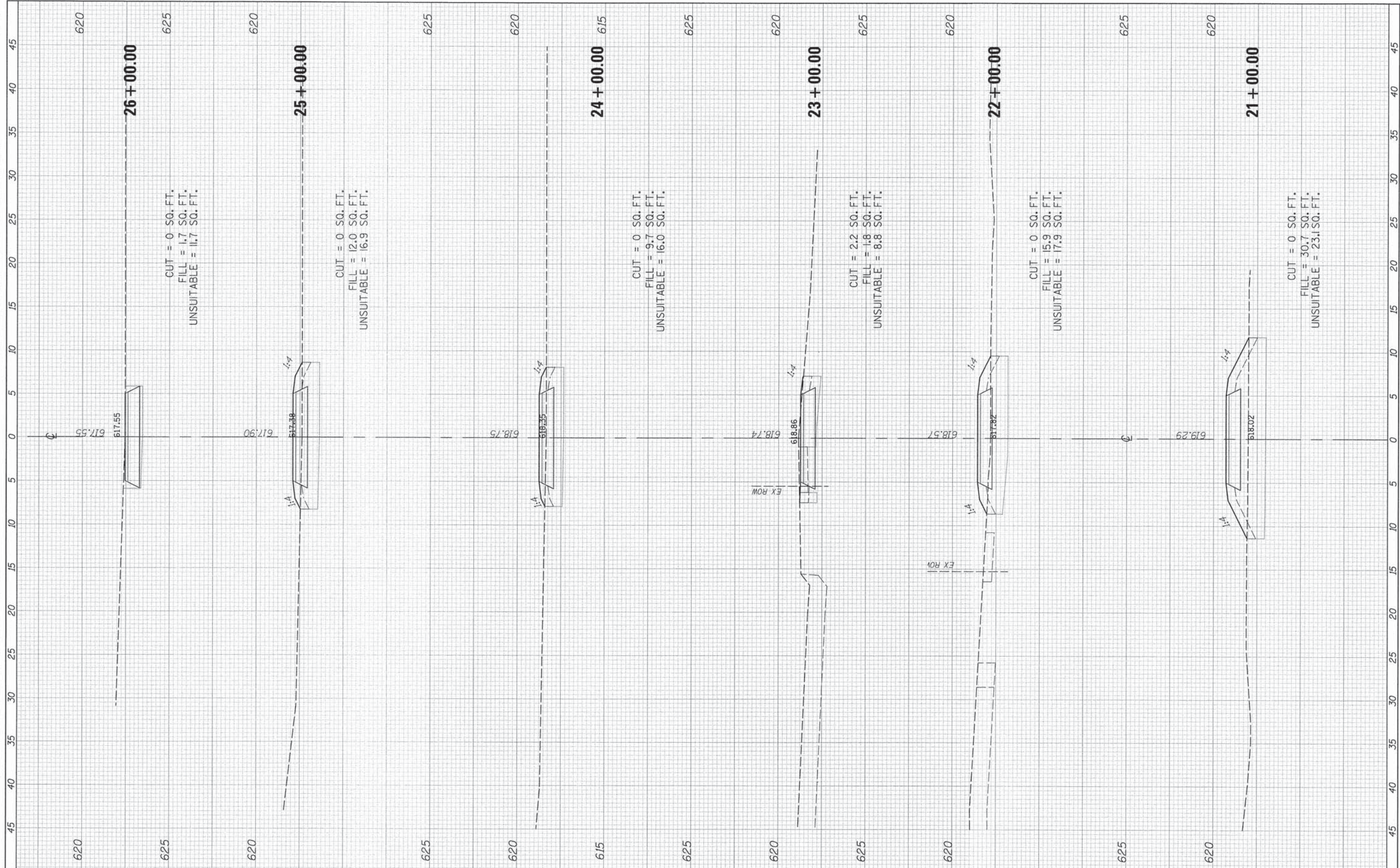
CUT = 0 SQ. FT.  
FILL = 23.2 SQ. FT.  
UNSUITABLE = 22.6 SQ. FT.

CUT = 0 SQ. FT.  
FILL = 25.8 SQ. FT.  
UNSUITABLE = 22.3 SQ. FT.

FILE NAME #	USER NAME = David.Landwehr	DESIGNED	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	NORTH BRANCH BIKE TRAIL EXTENSION CROSS SECTIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = 5,000' / in.	CHECKED = DDL	REVISED			08-F3000-21-BT	COOK	129	94		
#MODEL#	PLOT DATE = 12/5/2014	DATE = 10/20/14	REVISED			CONTRACT NO. 61A86		ILLINOIS FED. AID PROJECT			
						SCALE:	SHEET 2 OF 37 SHEETS	STA. 16+00.00 TO STA. 20+00.00			

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

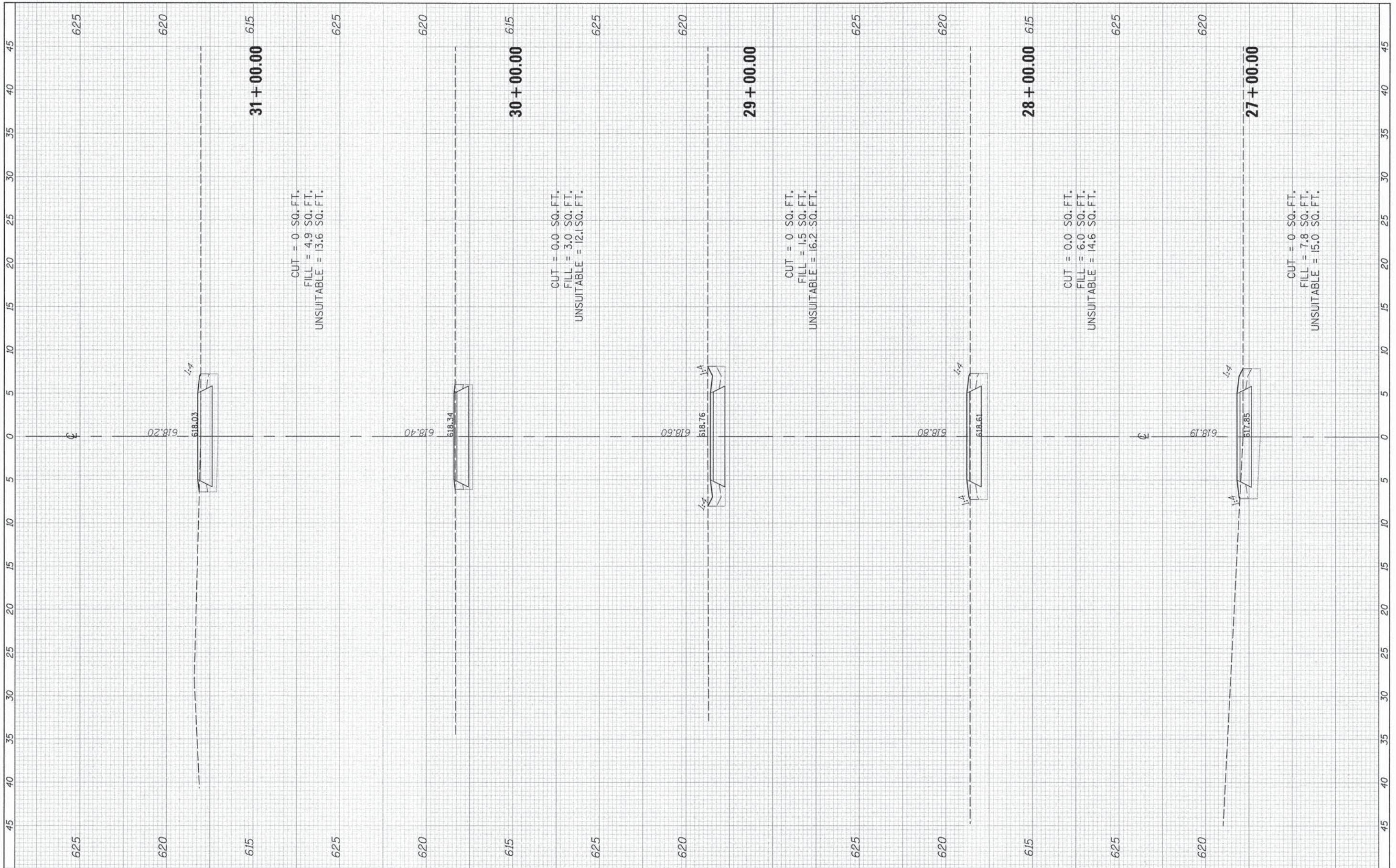
ORIGINAL SURVEY	BY	DATE
SURVEYED		
NOTE BOOK		
TEMPLATE		
AREAS CHECKED		
NO.		



FILE NAME =	USER NAME = David.Landwehr	DESIGNED =	REVISED =	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION</b> <b>CROSS SECTIONS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	PLOT SCALE = 5.0000' / in.	DRAWN =	REVISED =			08-F3000-21-BT	COOK	129	95	
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		DATE = 10/20/14	REVISED =			SCALE:	SHEET 3 OF 37 SHEETS	STA. 21+00.00 TO STA. 26+00.00		

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

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

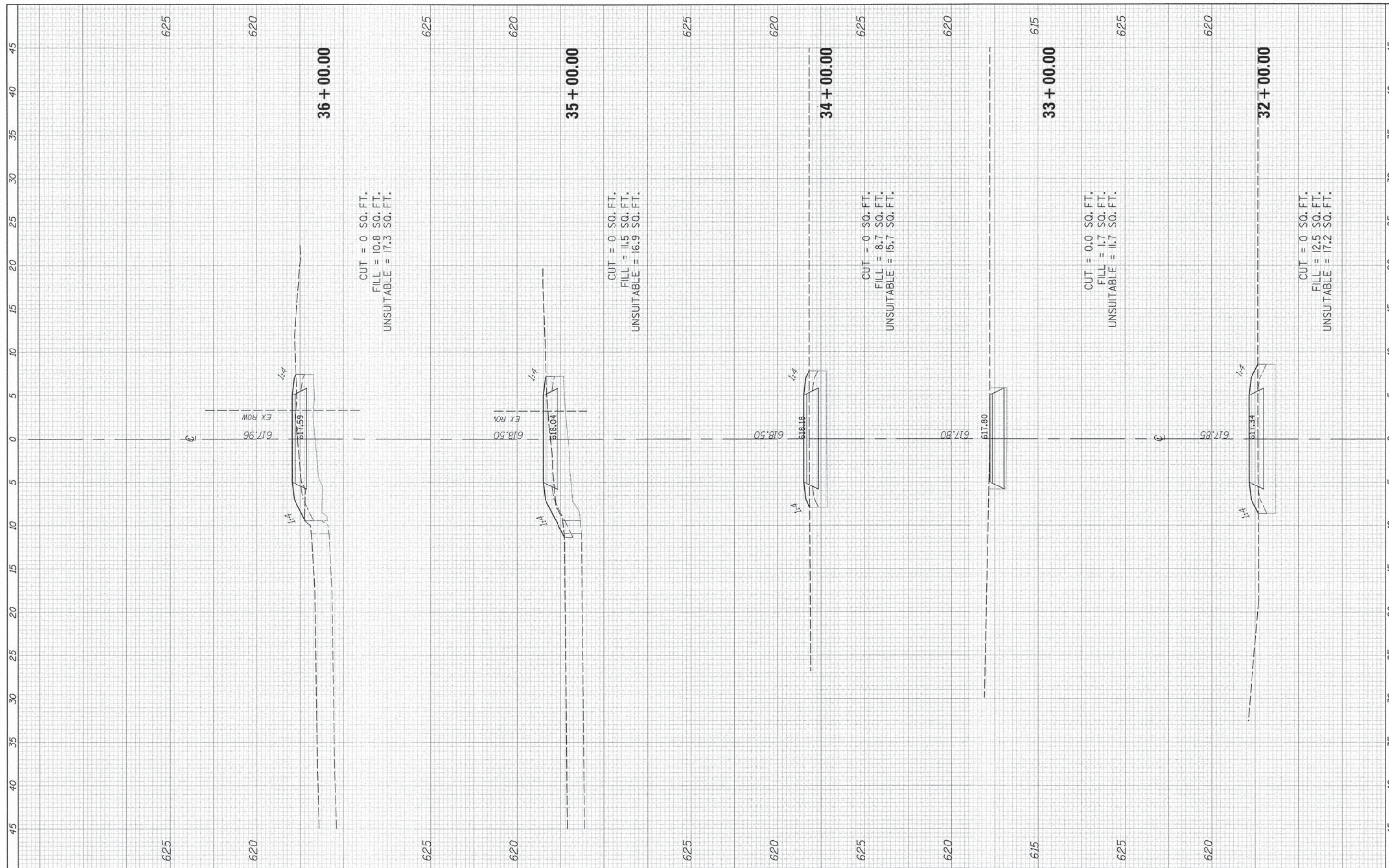


FILE NAME	USER NAME = David.Landwehr	DESIGNED	REVIS	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION</b> <b>CROSS SECTIONS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	PLOT SCALE = 5.0000 "/> <td>CHECKED = DDL</td> <td>REVIS</td> <td>08-F3000-21-BT</td> <td>COOK</td> <td>129</td> <td>96</td>	CHECKED = DDL	REVIS			08-F3000-21-BT	COOK	129	96	
#MODELNAME#	PLOT DATE = 12/5/2014	DATE = 10/20/14	REVIS			CONTRACT NO. 61A86			(ILLINOIS) FED. AID PROJECT	
						SCALE:	SHEET 4 OF 37 SHEETS	STA. 27+00.00 TO STA. 31+00.00		



FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	NO. _____		
AREAS CHECKED			

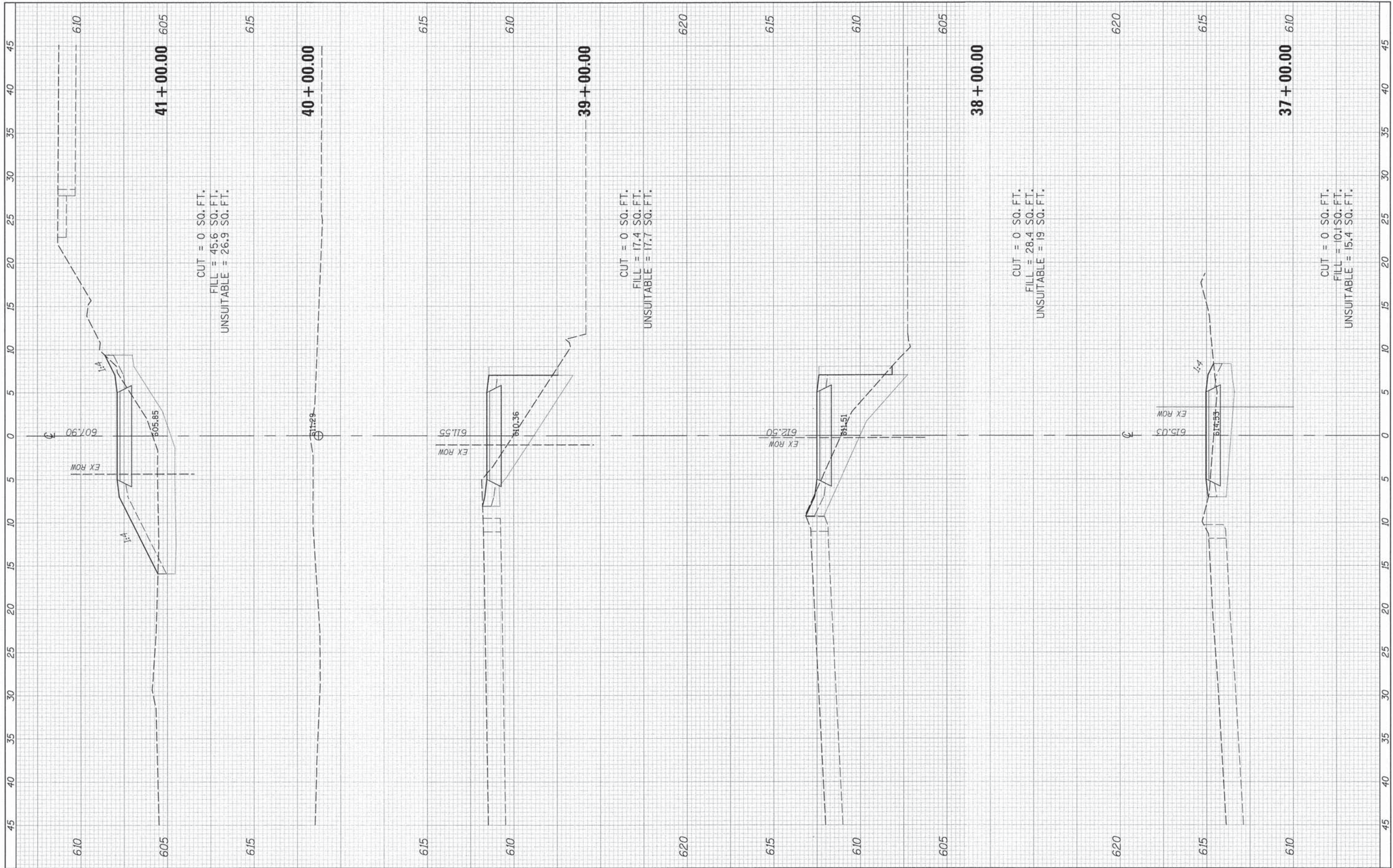
ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	NO. _____		
AREAS CHECKED			



FILE NAME	USER NAME = David.Lontewer	DESIGNED	REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION CROSS SECTIONS</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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MODEL NAME	PLOT DATE = 12/5/2014	DATE = 10/20/14	REVISED		SCALE: SHEET 5 OF 37 SHEETS STA. 32+00.00 TO STA. 36+00.00			CONTRACT NO. 61A86		ILLINOIS FED. AID PROJECT		

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

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



FILE NAME =  
#FILE#

USER NAME = David Landwehr  
PLOT SCALE = 5,00000' / 1" =  
PLOT DATE = 12/5/2014

DESIGNED -  
DRAWN -  
CHECKED - DDL  
DATE - 10/20/14

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

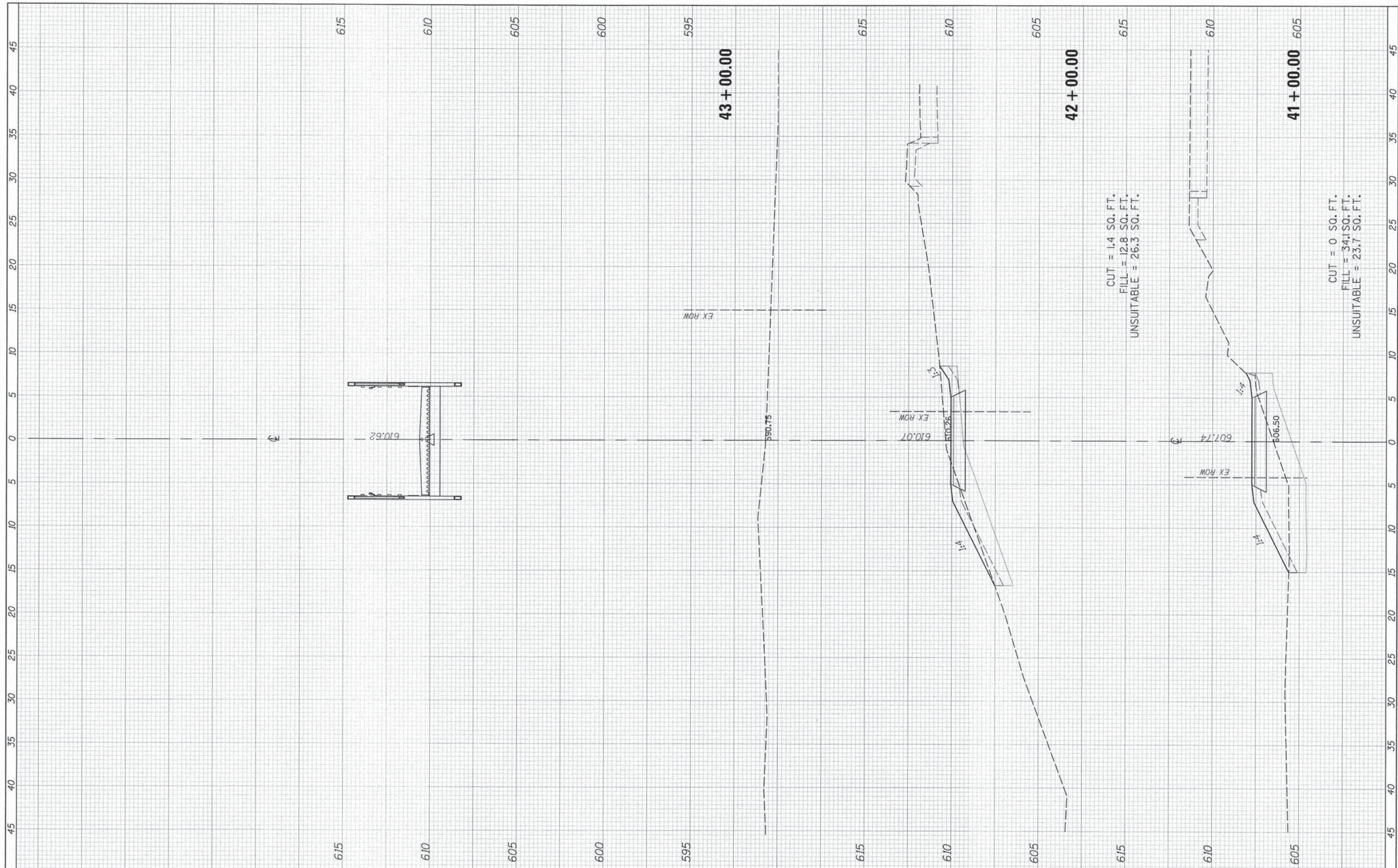
**NORTH BRANCH BIKE TRAIL EXTENSION  
CROSS SECTIONS**

SCALE: SHEET 6 OF 37 SHEETS STA. 37+00.00 TO STA. 41+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	08-F3000-21-BT	COOK	129	98
CONTRACT NO. 61A86			ILLINOIS FED. AID PROJECT	

FINAL SURVEY	BY	DATE
SUPERSEDED		
NOTE BOOK		
NO.		
AREAS CHECKED		

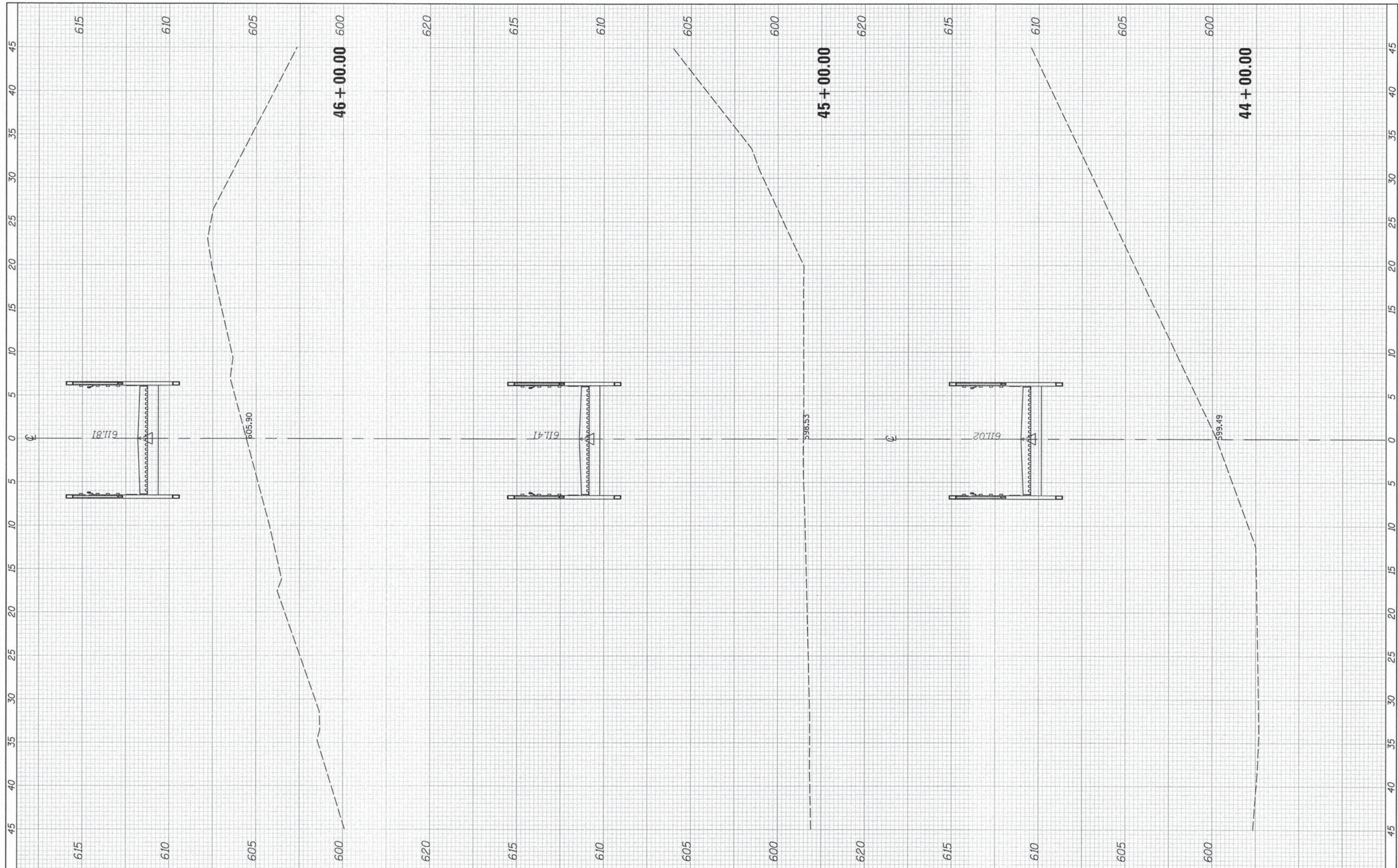
ORIGINAL SURVEY	BY	DATE
SUPERSEDED		
NOTE BOOK		
NO.		
AREAS CHECKED		



FILE NAME	USER NAME = David.Landwehr	DESIGNED	REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION CROSS SECTIONS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	PLOT SCALE = 5.0000" / 1"	DRAWN	REVISED			08-F3000-21-BT	COOK	129	99	
#MODELNAME#	PLOT DATE = 12/5/2014	CHECKED = DDL	REVISED			CONTRACT NO. 61A86				
		DATE = 10/20/14	REVISED			ILLINOIS FED. AID PROJECT				

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	



FILE NAME	USER NAME = David.Lundowner	DESIGNED	REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH BRANCH BIKE TRAIL EXTENSION CROSS SECTIONS</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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#MODELNAME#	PLOT DATE = 12/5/2014	DATE = 10/20/14	REVISED					CONTRACT NO. 61A86				
								ILLINOIS FED. AID PROJECT				