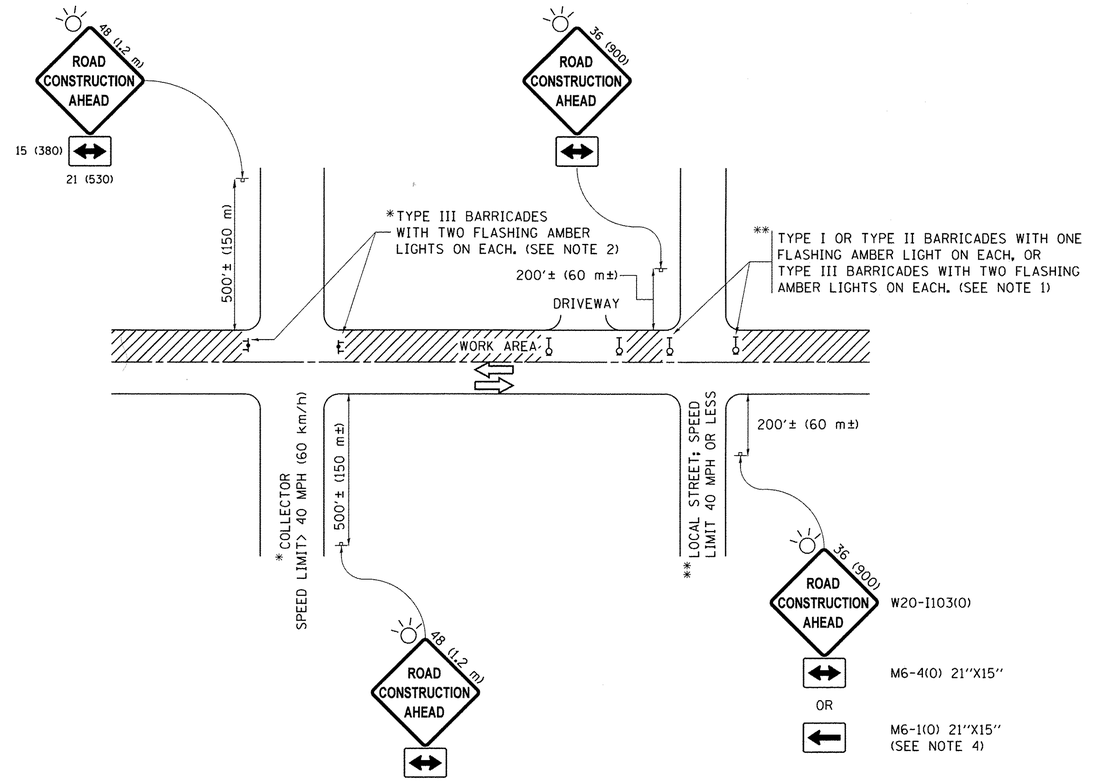


NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. 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).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

GEWALT HAMILTON ASSOCIATES, INC.

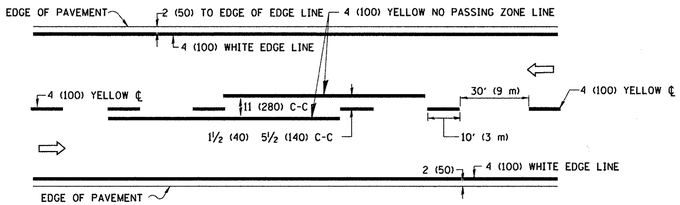
FILE NAME = StdDetails.dgn	USER NAME = MColeman	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
GHA# 4905.000		DRAWN - te\CADsheets\tc10.dgn	REVISED -T. RAMMACHER 01-06-00
IDOT DI STANDARD TC10	PLOT SCALE = 1:1	CHECKED -	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 11/14/2016	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

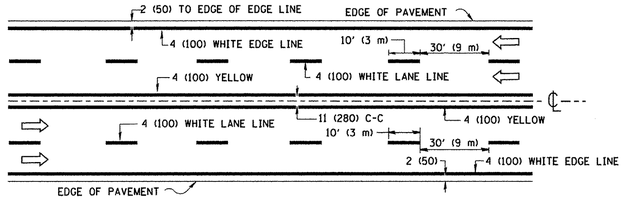
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

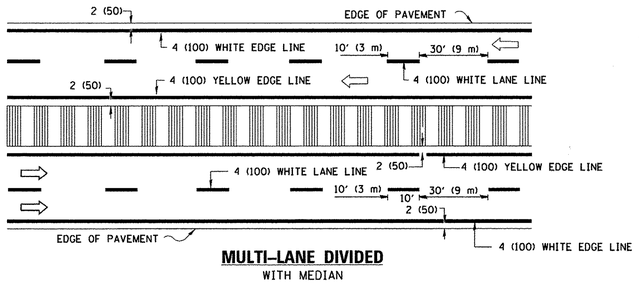
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	61
	TC-10	CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			



2–LANE ROADWAY

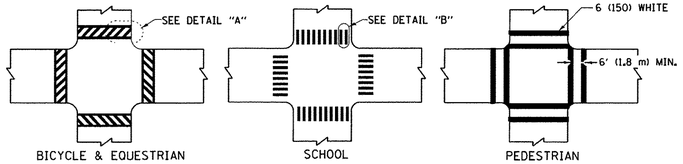


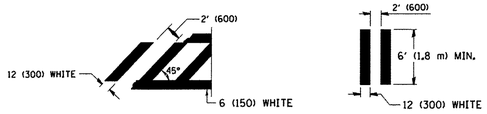
MULTI–LANE UNDIVIDED



MULTI–LANE DIVIDED
WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

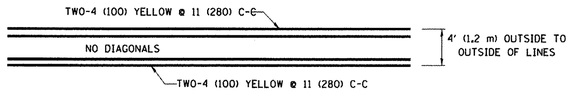




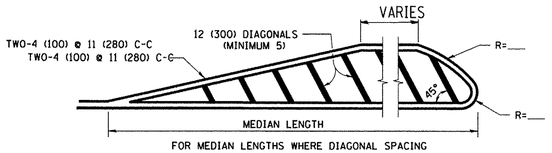
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

✳ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



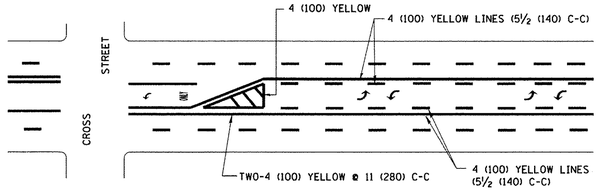
4' (1.2 m) WIDE MEDIANS ONLY



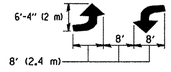
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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

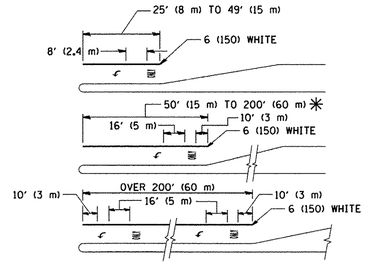


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

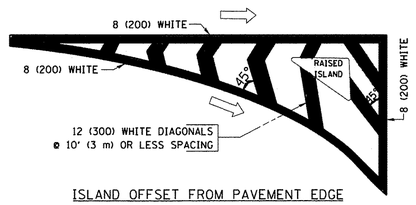


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) **ONLY** AREA = 20.8 SQ. FT. (1.9 m²)

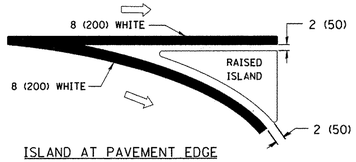
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

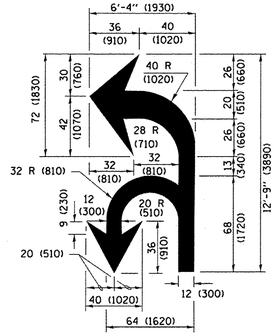


ISLAND OFFSET FROM PAVEMENT EDGE

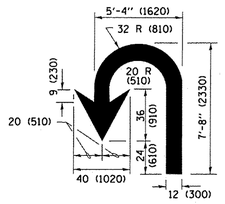


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

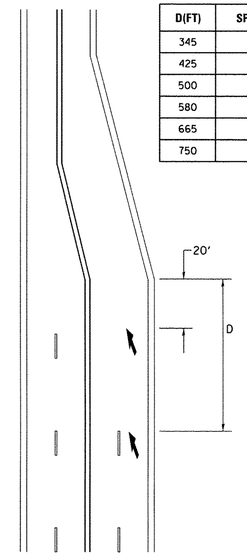


COMBINATION LEFT AND U–TURN



U–TURN

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55



LANE REDUCTION TRANSITION

✳ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

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	5½ (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 MEDIANS IN YELLOW
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; 5½ (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" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	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))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

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.

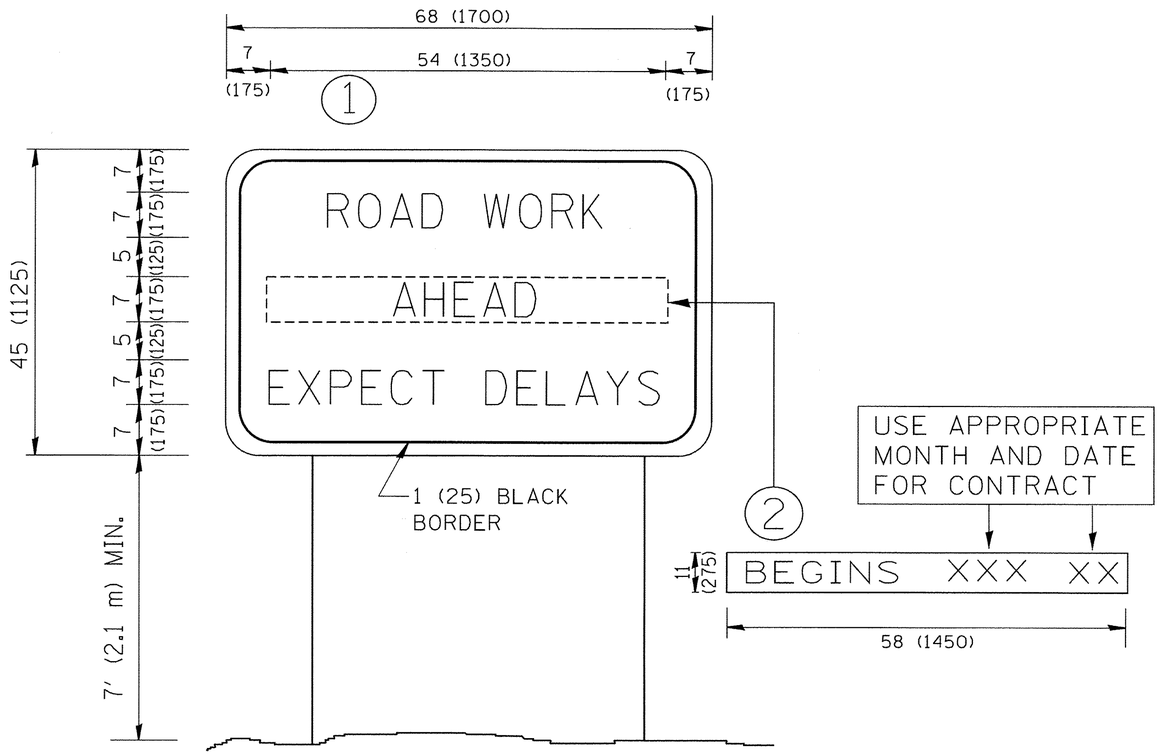
GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = StdDetails.dgn	USER NAME = MColeman	DESIGNED - EVERS	REVISED - T. RAMMACHER 10-27-94
GHA# 4905.000		DRAWN - -ts\CADsheets\tc13.dgn	REVISED - C. JUCIUS 09-09-09
IDOT DI STANDARD TC13	PLOT SCALE = 1:1	CHECKED -	REVISED - C. JUCIUS 07-01-13
	PLOT DATE = 11/14/2016	DATE - 03-19-90	REVISED - C. JUCIUS 12-21-15

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS
SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	62
	TC-13	CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			



NOTES:

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

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

GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = StdDetails.dgn	USER NAME = MColeman	DESIGNED -	REVISED - R. MIRS 09-15-97
GHA# 4905.000		DRAWN -	REVISED - R. MIRS 12-11-97
IDOT DI STANDARD TC22	PLOT SCALE = 1:1	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 11/14/2016	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	63
	TC-22	CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			

CONSTRUCTION STAGING GENERAL NOTES

1. ALL SIGNING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016", THE DETAILS IN THESE PLANS AND THE LATEST EDITION OF THE STATE OF ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

2. ALL CONSTRUCTION WARNING SIGNS SHALL BE BLACK LEGEND ON ORANGE BACKGROUND AND SHALL BE 48"X48", UNLESS OTHERWISE NOTED.

3. ALL CONSTRUCTION VEHICLES SHALL ACCESS LYONS WOODS TRAIL EXTENSION CONSTRUCTION SITE FROM METROPOLITAN LANE, McAREE ROAD AND LEWIS AVENUE ONLY. NO ACCESS TO CONSTRUCTION SITE SHALL BE ALLOWED FROM IL 131 (GREEN BAY ROAD OR ROBERT McCLORY PATH, CROSSING BUTRICK STREET FROM THE EAST OR WEST SHALL BE ALLOWED, BUT NO CONSTRUCTION TRAFFIC WILL BE ALLOWED TO USE BUTRICK STREET FOR ACCESS.

4. "NO CONSTRUCTION TRAFFIC" (SPECIAL 36"X36") SIGNS SHALL BE INSTALLED AT ROBERT McCLORY BIKE PATH, EAST END AVENUE AND CORNELL ROAD AT THE YORK HOUSE ROAD INTERSECTION. "NO CONSTRUCTION TRAFFIC" (SPECIAL 24"X24") SHALL BE INSTALLED AT McKAY STREET, PARTRIDGE STREET AND BALLENTINE STREET AT THE LEWIS AVENUE INTERSECTION.

5. ALL CONSTRUCTION ACTIVITY BETWEEN IL 131 (GREEN BAY ROAD) AND THE BRIDGE AT BEVIER PARK SHALL ENTER THE CONSTRUCTION SITE AT THE METROPOLITAN AVENUE OR McAREE ROAD ONLY.

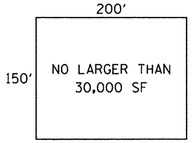
6. ALL CONSTRUCTION ACTIVITY BETWEEN THE BRIDGE AT BEVIER PARK AND THE ROBERT McCLORY BIKE PATH SHALL ENTER THE CONSTRUCTION SITE AT LEWIS AVENUE ONLY.

7. THE CONTRACTOR SHALL INSTALL TEMPORARY CHAIN LINK FENCING (6 FT) AROUND THE CONSTRUCTION STAGING AND STOCKPILE AREAS LOCATED AT THE SOUTHWEST CORNER OF CALLAHAN PARK AND AT THE WEST SIDE OF LEWIS AVENUE, SOUTH OF THE COMED PROPERTY. THE CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION WITH THE ENGINEER AND THE WAUKEGAN PARK DISTRICT. THE CONTRACTOR SHALL LOCK THE EXISTING SECURITY GATE EVERY EVENING PER WAUKEGAN PARK DISTRICT INSTRUCTIONS. AFTER ALL TRAIL CONSTRUCTION IS COMPLETED, THE STAGING AND STOCKPILE AREAS SHALL BE RESTORED WITH TOPSOIL AND SEEDING. THE GRAVEL ENTRANCE ROAD TO CALAHAN PARK SHALL BE RESTORED WITH GRAVEL.

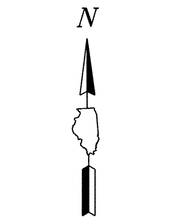
8. ALL BRIDGE CONSTRUCTION ACTIVITIES SHALL USE THE NORTH BAY OF THE EXISTING PARKING LOT AT BEVIER PARK. THE CONTRACTOR SHALL INSTALL TEMPORARY CHAIN LINK FENCING (6 FT) AROUND THE BRIDGE CONSTRUCTION STAGING AREA. ALL BRIDGE CONSTRUCTION VEHICLES (CRANE, BACK HOE, BULLDOZER, PUMP TRUCKS, ECT) SHALL BE STORED WITHIN THIS AREA. AFTER THE BRIDGE IS INSTALLED THE CONTRACTOR SHALL REMOVE ALL TEMPORARY FENCING, VEHICLES AND DEBRIS AND RESTORE THE AREA TO THE SATISFACTION OF THE WAUKEGAN PARK DISTRICT.

9. NO SOIL SHALL BE REMOVED FROM THE EXISTING LANDFILL ZONE PER LCHD/IEPA DOCUMENTS.

10. THE CONTRACTOR SHALL INSPECT AND REPAIR ALL TEMPORARY FENCING ON A WEEKLY BASIS.

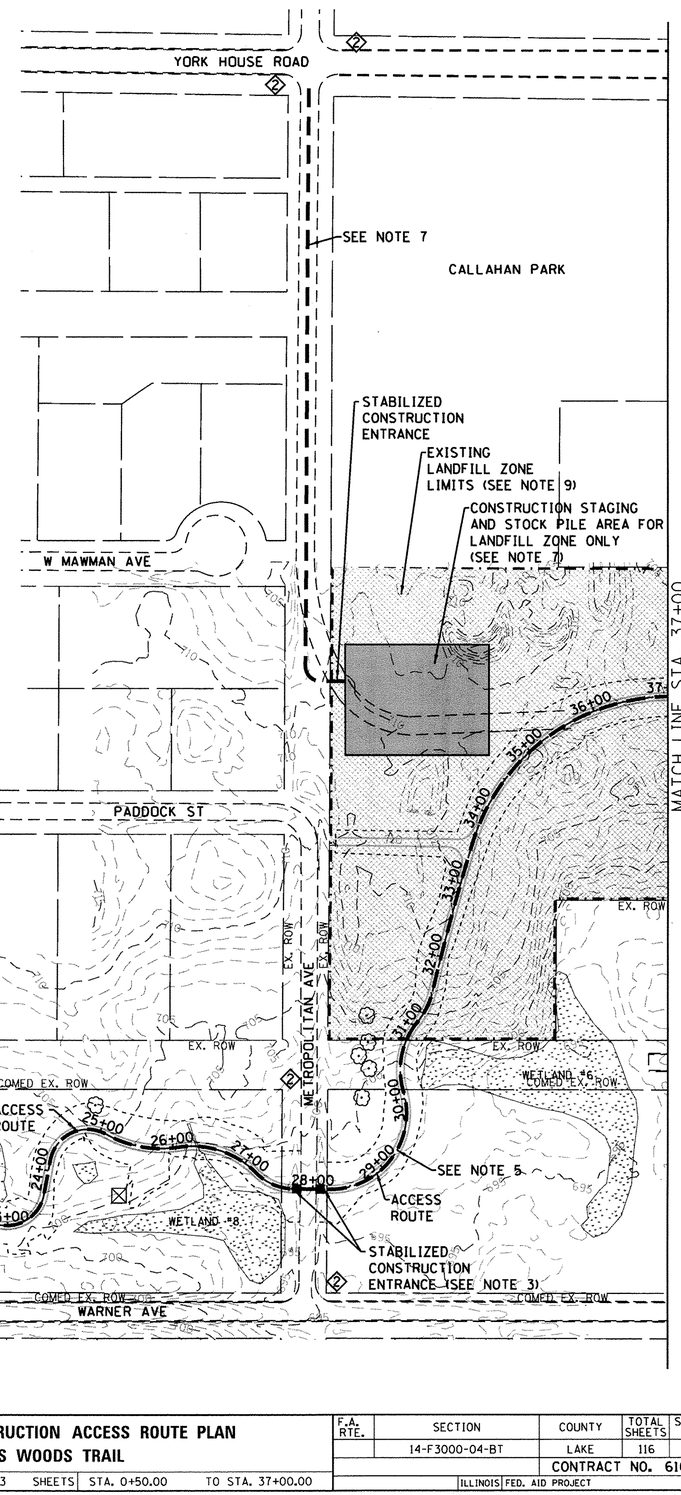


TEMPORARY CHAIN LINK FENCING (6FT)



LEGEND

- EXISTING BOUNDARY LINE
- PROPOSED TRAIL CENTERLINE
- EXISTING WETLAND
- REGULATORY FLOODWAY
- EXISTING LANDFILL ZONE
- PROPOSED GRADING LIMITS
- DESIGNATED ACCESS ROUTE



LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

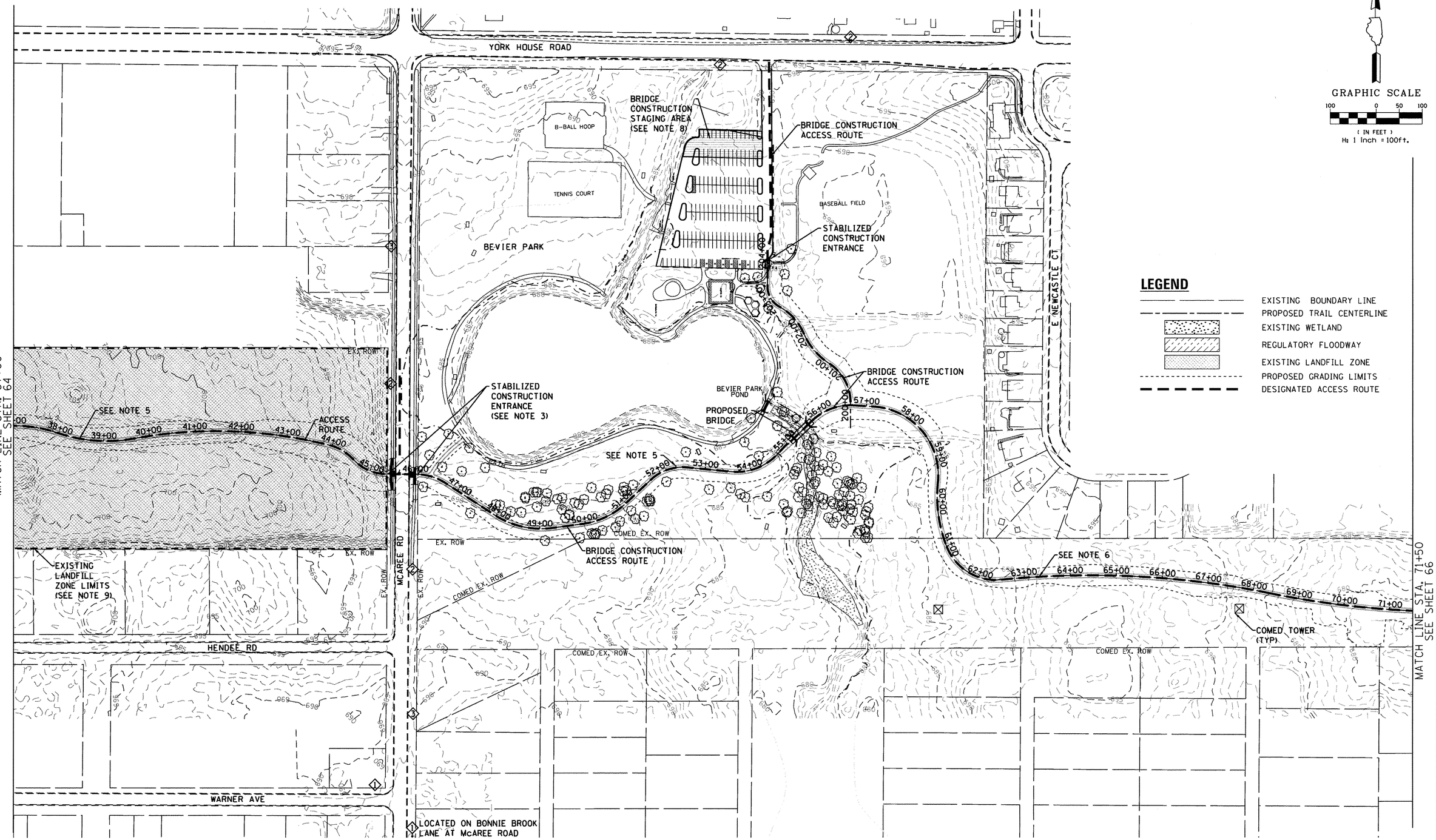
FILE NAME = 4905-x00 construction access.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED -
GHA# 4905.000		DRAWN - PJS	REVISED -
Model	PLOT SCALE = 1:100	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUGGESTED CONSTRUCTION ACCESS ROUTE PLAN
LYONS WOODS TRAIL

SCALE: 1"=100' | SHEET 1 OF 3 SHEETS | STA. 0+50.00 TO STA. 37+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	64
		CONTRACT NO. 61C67		
		ILLINOIS FED. AID PROJECT		



LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = 4905-x01 construction access.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED -
GHA# 4905.000		DRAWN - PJS	REVISED -
Model	PLOT SCALE = 1:100	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUGGESTED CONSTRUCTION ACCESS ROUTE PLAN
LYONS WOODS TRAIL

SCALE: 1"=100' | SHEET 2 OF 3 SHEETS | STA. 37+00.00 TO STA. 72+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	65
		CONTRACT NO. 61C67		
		ILLINOIS FED. AID PROJECT		

N

GRAPHIC SCALE

100 0 50 100

(IN FEET)

H: 1 Inch = 100ft.

LEGEND

- EXISTING BOUNDARY LINE
- PROPOSED TRAIL CENTERLINE
- EXISTING WETLAND
- REGULATORY FLOODWAY
- EXISTING LANDFILL ZONE
- PROPOSED GRADING LIMITS
- DESIGNATED ACCESS ROUTE

YORK HOUSE ROAD

N CORNELL RD

NE END AVE

ROBERT McCLORY BIKE PATH

McARTHUR DR

BUTRICK ST

LIZABETH LN

N PINE ST

RICE STREET

LEWIS AVE

MATCH LINE STA. 71+50
SEE SHEET 65

COMED EX. ROW

STABILIZED CONSTRUCTION ENTRANCE (SEE NOTE 3)

SEE NOTE 6

ACCESS ROUTE

COMED TOWER (TYP)

WETLAND #11

WETLAND #12

WETLAND #13

WETLAND #17

WETLAND #18

WETLAND #19

CONSTRUCTION STAGING AND STOCK PILE AREA (SEE NOTE 7)

WAUKEGAN PARK DISTRICT PROPERTY

TEMPORARY CONSTRUCTION CROSS ACCESS ONLY. NO ACCESS FROM BUTRICK STREET SHALL BE ALLOWED.

LOCATED ON BONNIE BROOK LANE AT McAREE ROAD

LOCATED AT McKAY STREET, PARTRIDGE STREET AND BALLANTINE STREET AT LEWIS AVENUE

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

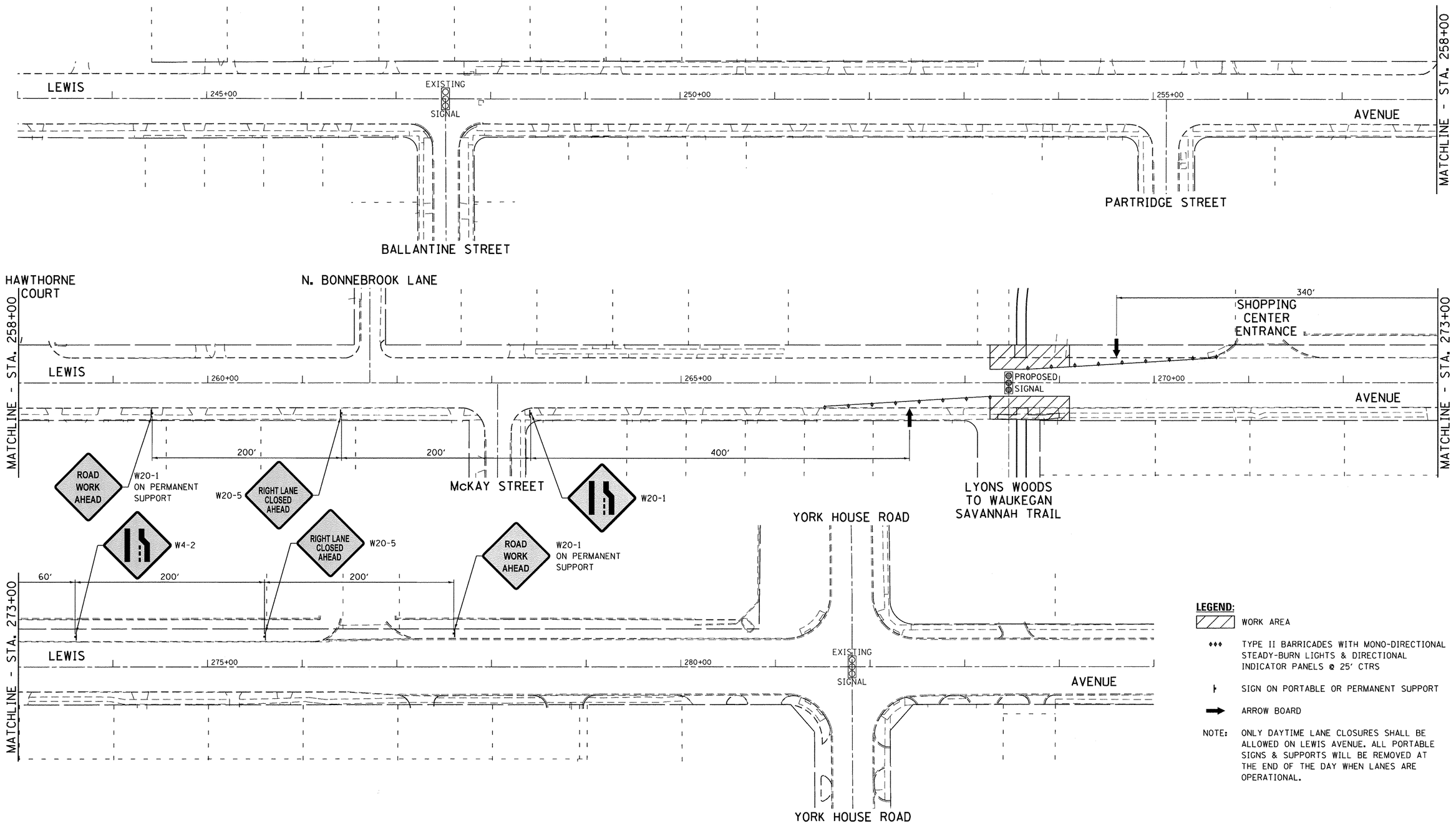
FILE NAME = 4905-x02 construction access.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED -
GHA# 4905.000		DRAWN - PJS	REVISED -
Model	PLOT SCALE = 1:100	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUGGESTED CONSTRUCTION ACCESS ROUTE PLAN
LYONS WOODS TRAIL

SCALE: 1"=100' | SHEET 3 OF 3 SHEETS | STA. 72+00.00 | TO STA. 103+62.34

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	66
		CONTRACT NO. 61C67		
		ILLINOIS FED. AID PROJECT		



LEGEND:

- WORK AREA
- ♦♦♦ TYPE II BARRICADES WITH MONO-DIRECTIONAL STEADY-BURN LIGHTS & DIRECTIONAL INDICATOR PANELS @ 25' CTRS
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- ARROW BOARD

NOTE: ONLY DAYTIME LANE CLOSURES SHALL BE ALLOWED ON LEWIS AVENUE. ALL PORTABLE SIGNS & SUPPORTS WILL BE REMOVED AT THE END OF THE DAY WHEN LANES ARE OPERATIONAL.

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

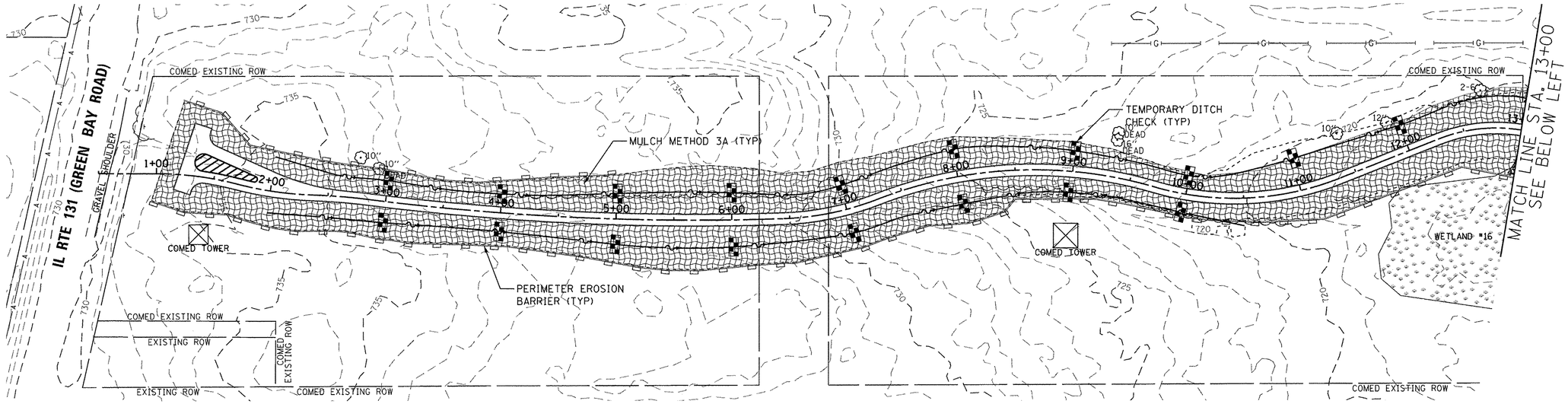
FILE NAME = 4905-Staging.dgn GHA# 4905.000 Default	USER NAME = MColeman	DESIGNED - MKH	REVISED -
		DRAWN - PJS	REVISED -
	PLOT SCALE = 1:50	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

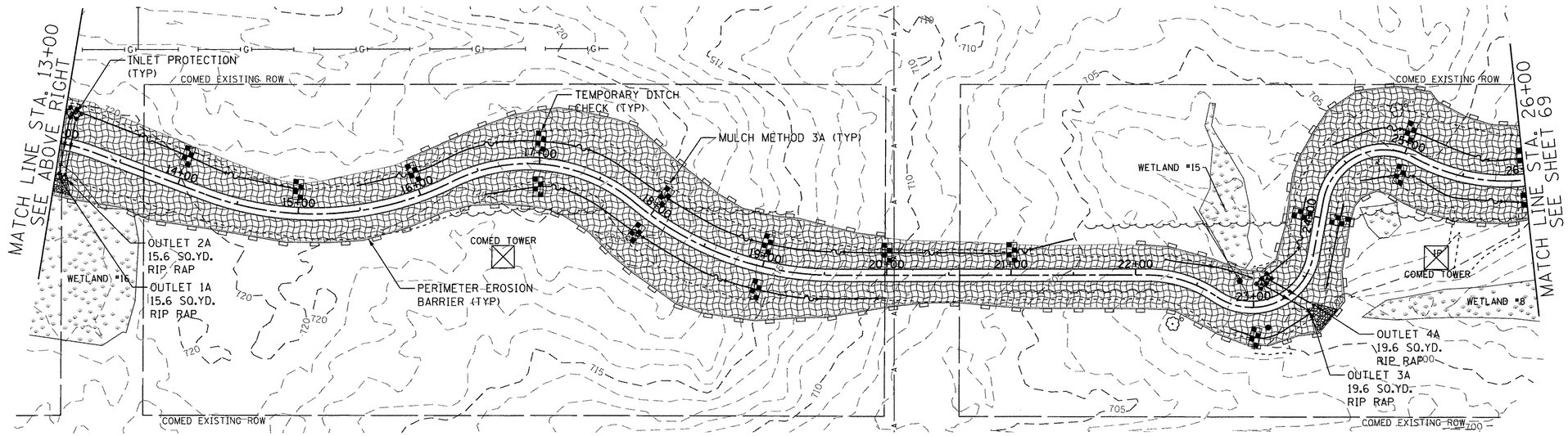
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN – LEWIS AVENUE
LYONS WOODS TRAIL

SCALE: 1"=50' | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	67
		CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			





N

GRAPHIC SCALE

50 0 25 50

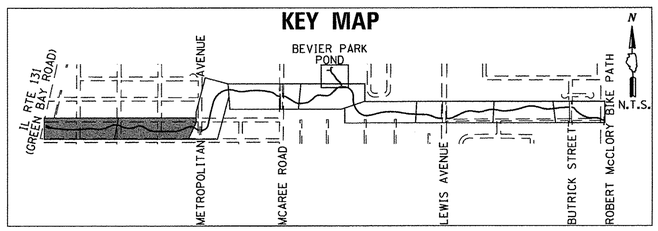
(IN FEET)

H: 1 inch = 50 ft.

NOTE

1. SLOPES GREATER THAN 3:1, DITCHES AND OTHER CONCENTRATED FLOW ZONES SHALL BE COVERED WITH NORTH AMERICAN GREEN (NAG) S75BN EROSION CONTROL BLANKET OR APPROVED EQUAL AND WITH THE MANUFACTURERS RECOMMENDED STAPLE PATTERN. DITCHES TYPICALLY REQUIRE A MINIMUM OF TWO (2) ROLLS OF BLANKET AT 6.67' WIDTH EACH.

KEY MAP



LEGEND

- EXISTING BOUNDARY LINE
- EXISTING WETLAND
- REGULATORY FLOODWAY
- MULCH METHOD 3A
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK, URETHANE FOAM/GEOTEXTILE
- INLET AND PIPE PROTECTION
- INLET FILTERS
- STORM SEWER
- DITCH FLOW OR OUTFALL
- PROPOSED GRADING LIMITS
- FLOODPLAIN BOUNDARY

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

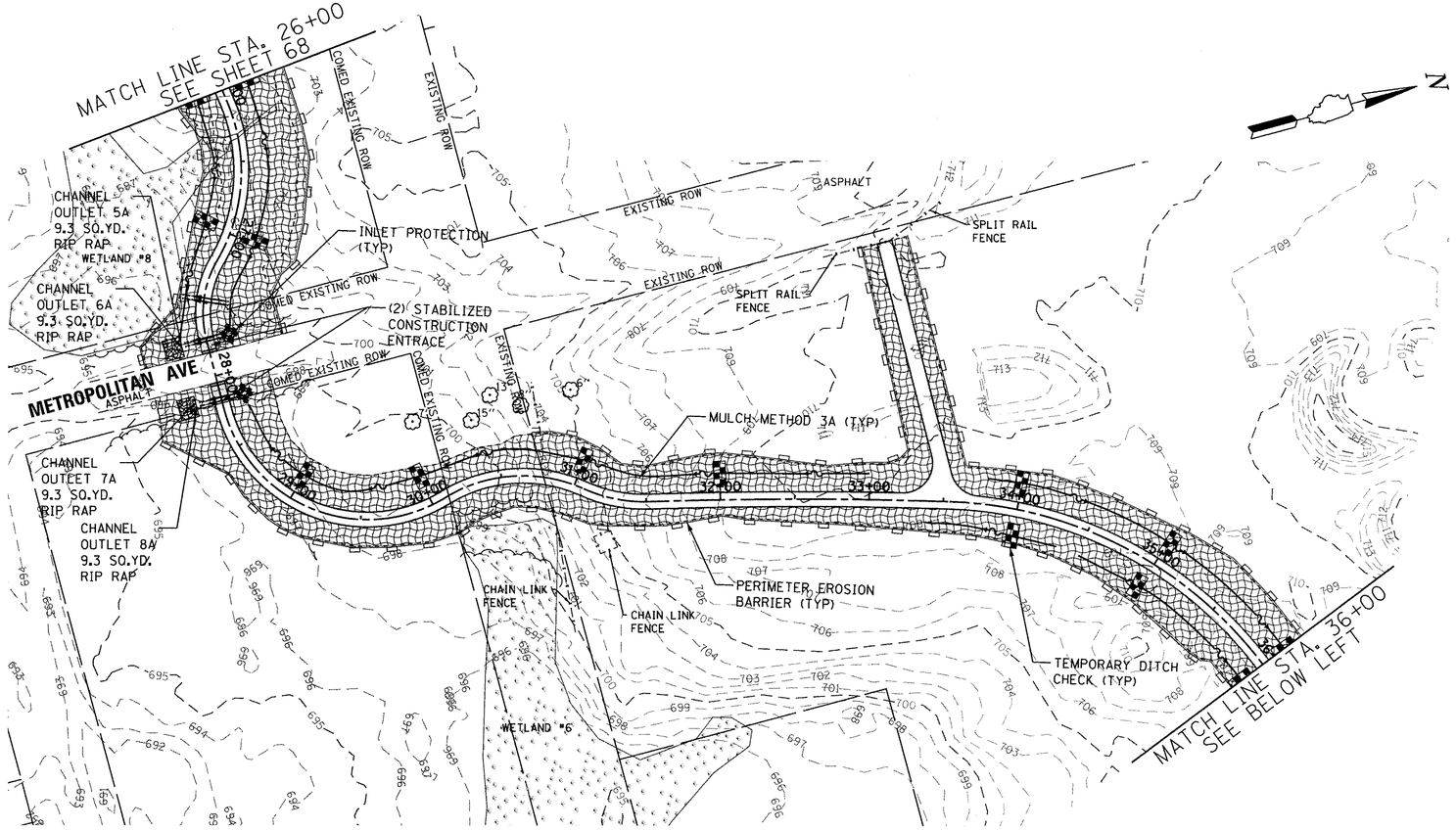
FILE NAME = 4905-xx01-erosion control.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED - 11/9/2016
GHA# 4905.000		DRAWN - PJS	REVISED -
PnP.01	PLOT SCALE = 1:50	CHECKED - DJS	REVISED -
	PLOT DATE = 11/18/2016	DATE -	REVISED -

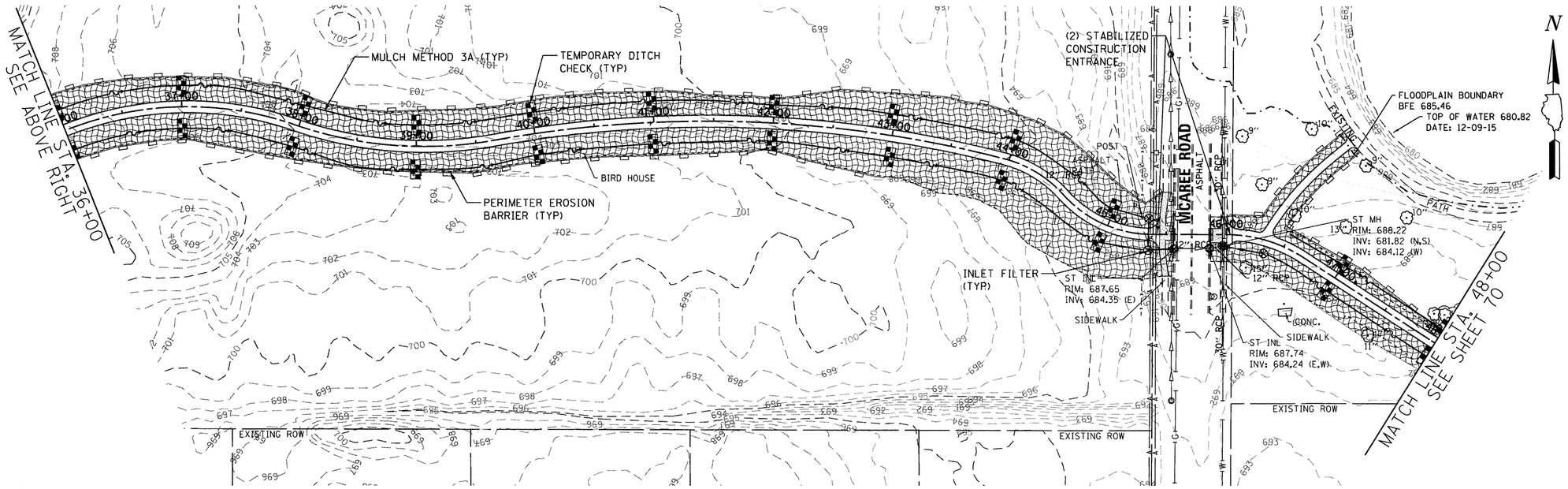
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
LYONS WOODS TRAIL

SCALE: N.T.S. | SHEET 1 OF 5 SHEETS | STA. 0+50.00 | TO STA. 26+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	68
		CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			





GRAPHIC SCALE

50 0 25 50

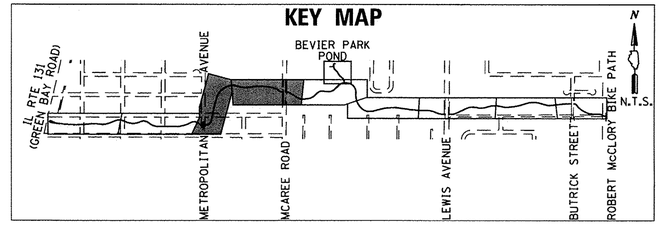
(IN FEET)

H: 1 inch = 50 ft.

LEGEND

- EXISTING BOUNDARY LINE
- EXISTING WETLAND
- REGULATORY FLOODWAY
- MULCH METHOD 3A
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK, URETHANE FOAM/GEOTEXTILE
- INLET AND PIPE PROTECTION
- INLET FILTERS
- STORM SEWER
- DITCH FLOW OR OUTFALL
- PROPOSED GRADING LIMITS
- FLOODPLAIN BOUNDARY

KEY MAP



NOTE

1. SLOPES GREATER THAN 3:1, DITCHES AND OTHER CONCENTRATED FLOW ZONES SHALL BE COVERED WITH NORTH AMERICAN GREEN (NAG) S75BN EROSION CONTROL BLANKET OR APPROVED EQUAL AND WITH THE MANUFACTURERS RECOMMENDED STAPLE PATTERN. DITCHES TYPICALLY REQUIRE A MINIMUM OF TWO (2) ROLLS OF BLANKET AT 6.67' WIDTH EACH.

LAKE COUNTY FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

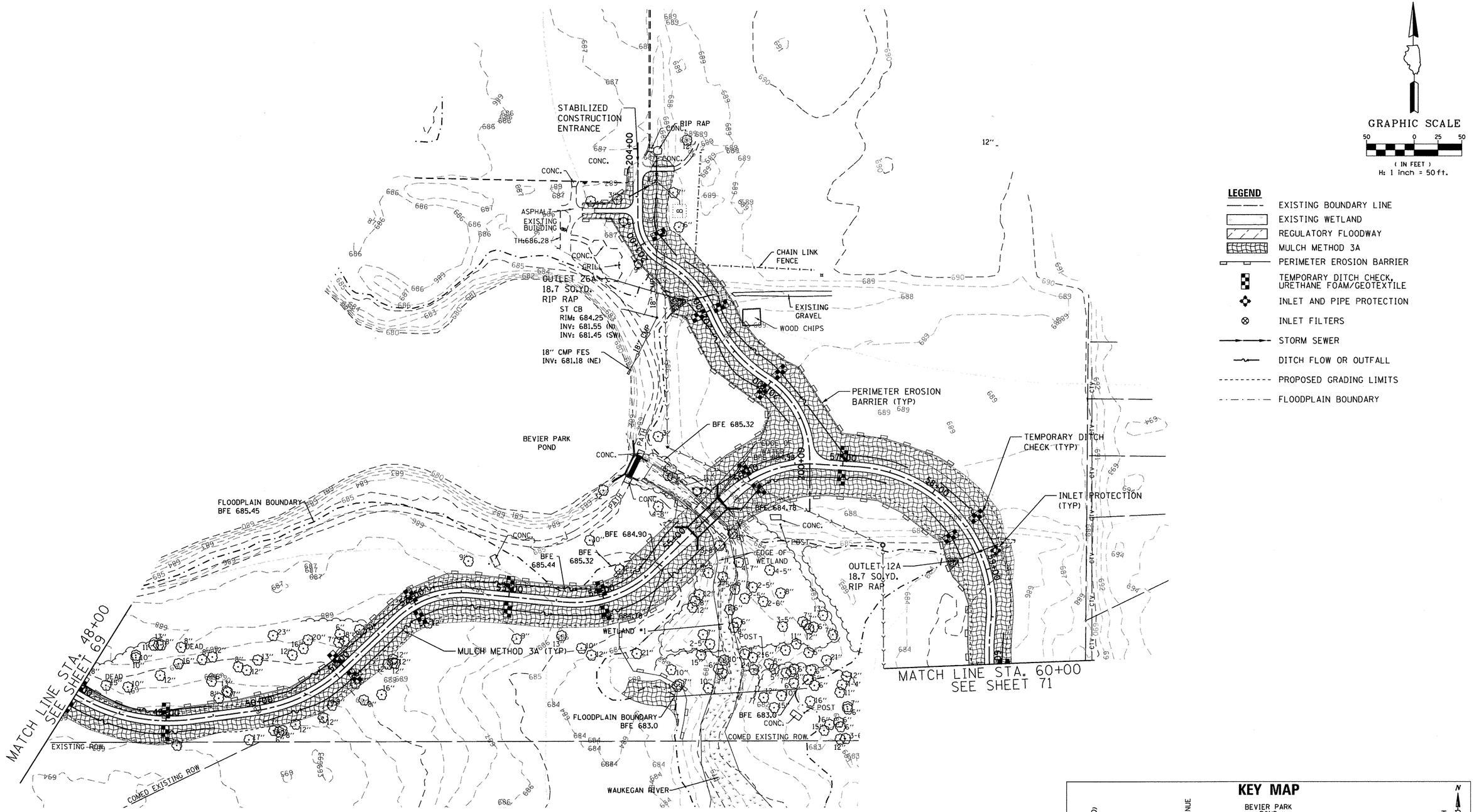
FILE NAME = 4905-xx02-erosion control.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED - 11/9/2016
GHA# 4905.000		DRAWN - PJS	REVISED -
PnP.01	PLOT SCALE = 1:50	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
LYONS WOODS TRAIL

SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. 26+00.00 TO STA. 48+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	69
		CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			



N

GRAPHIC SCALE

50 0 25 50

(IN FEET)

H: 1 inch = 50 ft.

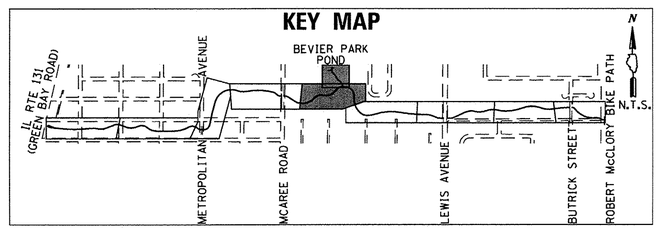
LEGEND

- EXISTING BOUNDARY LINE
- EXISTING WETLAND
- REGULATORY FLOODWAY
- MULCH METHOD 3A
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK, URETHANE FOAM/GEOTEXTILE
- INLET AND PIPE PROTECTION
- INLET FILTERS
- STORM SEWER
- DITCH FLOW OR OUTFALL
- PROPOSED GRADING LIMITS
- FLOODPLAIN BOUNDARY

NOTE

1. SLOPES GREATER THAN 3:1, DITCHES AND OTHER CONCENTRATED FLOW ZONES SHALL BE COVERED WITH NORTH AMERICAN GREEN (NAG) S75BN EROSION CONTROL BLANKET OR APPROVED EQUAL AND WITH THE MANUFACTURERS RECOMMENDED STAPLE PATTERN. DITCHES TYPICALLY REQUIRE A MINIMUM OF TWO (2) ROLLS OF BLANKET AT 6.67' WIDTH EACH.

KEY MAP



LAKE COUNTY FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = 4905-xx03-erosion control.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED - 11/9/2016
GHA# 4905.000		DRAWN - PJS	REVISED -
PnP.01	PLOT SCALE = 1:50	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
LYONS WOODS TRAIL

SCALE: N.T.S. | SHEET 3 OF 5 SHEETS | STA. 48+00.00 TO STA. 60+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	70
		CONTRACT NO. 61C67		
		ILLINOIS FED. AID PROJECT		

MATCH LINE STA. 60+00
SEE SHEET 70

COMED EXISTING ROW

61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00

TEMPORARY DITCH CHECK (TYP)

PERIMETER EROSION BARRIER (TYP)

MULCH METHOD 3A (TYP)

COMED TOWER

COMED TOWER

COMED EXISTING ROW

COMED EXISTING ROW

MATCH LINE STA. 70+50
SEE BELOW LEFT

N

GRAPHIC SCALE

50 0 25 50

(IN FEET)
H: 1 inch = 50 ft.

LEGEND

- EXISTING BOUNDARY LINE
- EXISTING WETLAND
- REGULATORY FLOODWAY
- MULCH METHOD 3A
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK, URETHANE FOAM/GEOTEXTILE
- INLET AND PIPE PROTECTION
- INLET FILTERS
- STORM SEWER
- DITCH FLOW OR OUTFALL
- PROPOSED GRADING LIMITS
- FLOODPLAIN BOUNDARY

MATCH LINE STA. 70+50
SEE ABOVE RIGHT

COMED EXISTING ROW

TARGET ENTRANCE

LEWIS AVENUE (CH 27)

INLET PROTECTION (TYP)

71+00 72+00 73+00 74+00 75+00

OUTLET 13A
18.7 SQ.YD.
RIP RAP

OUTLET 14A
18.7 SQ.YD.
RIP RAP

PERIMETER EROSION BARRIER (TYP)

COMED EXISTING ROW

INLET FILTER (TYP)

WOOD FENCE

COMED EQUIPMENT INSIDE FENCES

CHAIN LINK FENCE

ST MH
RIM: 673.69
INV: 668.69 (N,S)
INV: 669.64 (SE)
INV: 669.69 (SW)

ST INL
RIM: 673.06
INV: 669.66 (NE)

COMED TOWER

GRAVEL

12" RCP

ST INL
RIM: 673.21
INV: 670.41 (NW)

(2) STABILIZED CONSTRUCTION ENTRANCE

GRAVEL

ASPHALT

SIDEWALK

CONCRETE PAD

76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00

TEMPORARY DITCH CHECK (TYP)

OUTLET 17A
7.8 SQ.YD.
RIP RAP

OUTLET 18A
7.8 SQ.YD.
RIP RAP

MULCH METHOD 3A (TYP)

COMED TOWER

WETLAND

COMED EXISTING ROW

EXISTING ROW

MATCH LINE STA. 83+50
SEE SHEET 72

NOTE

1. SLOPES GREATER THAN 3:1, DITCHES AND OTHER CONCENTRATED FLOW ZONES SHALL BE COVERED WITH NORTH AMERICAN GREEN (NAG) S75BN EROSION CONTROL BLANKET OR APPROVED EQUAL AND WITH THE MANUFACTURERS RECOMMENDED STAPLE PATTERN. DITCHES TYPICALLY REQUIRE A MINIMUM OF TWO (2) ROLLS OF BLANKET AT 6.67' WIDTH EACH.

KEY MAP

N

BEVIER PARK POND

IL RTE 131 (GREEN BAY ROAD)

METROPOLITAN AVENUE

MCAREE ROAD

LEWIS AVENUE

BUTRICK STREET

ROBERT MCCLORY BIKE PATH

N.T.S.

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

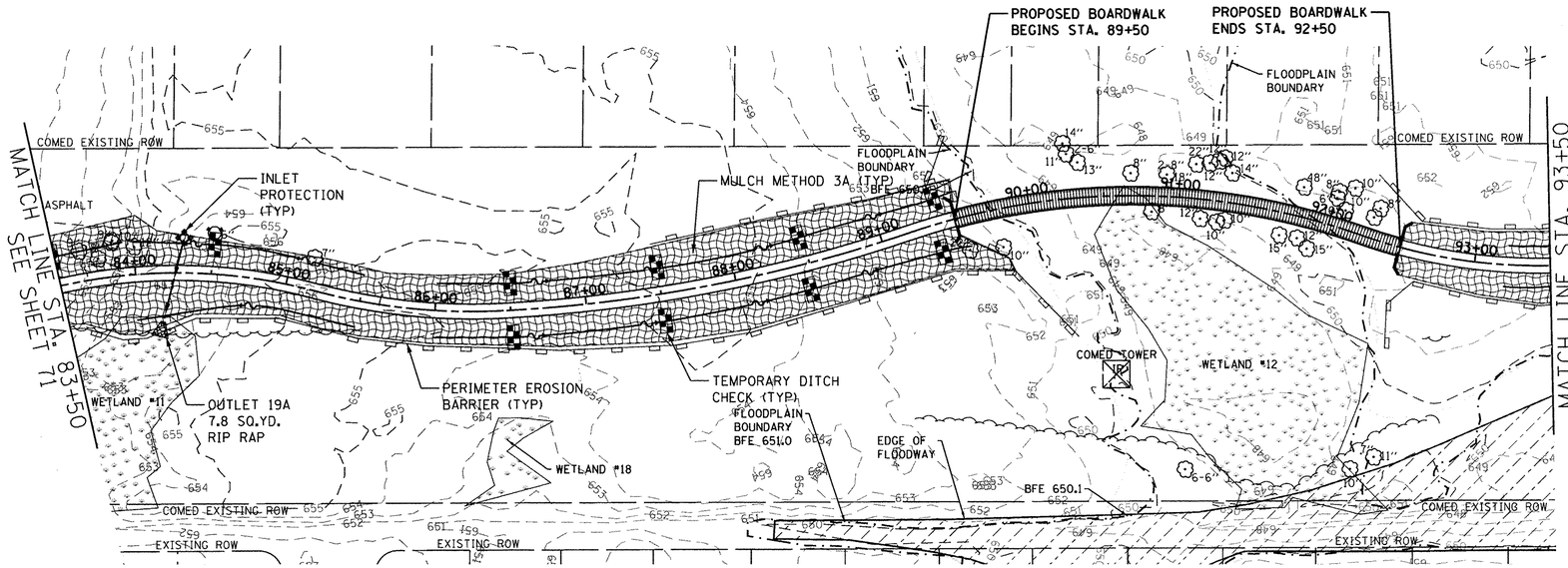
FILE NAME = 4905-xx04-erosion control.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED - 11/9/2016
GHA# 4905.000		DRAWN - PJS	REVISED -
PnP.01	PLOT SCALE = 1:50	CHECKED - DJS	REVISED -
	PLOT DATE = 11/18/2016	DATE -	REVISED -

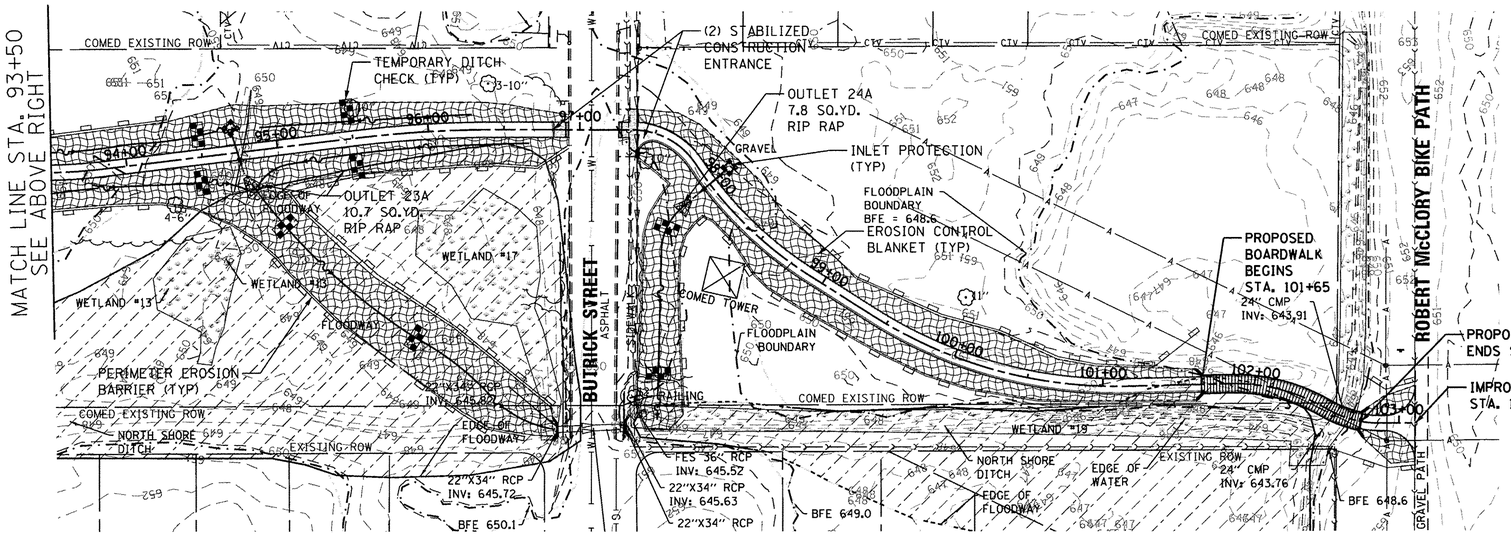
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

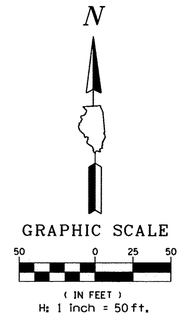
EROSION CONTROL
LYONS WOODS TRAIL

SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. 60+00.00 TO STA. 84+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	71
		CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			







NOTE

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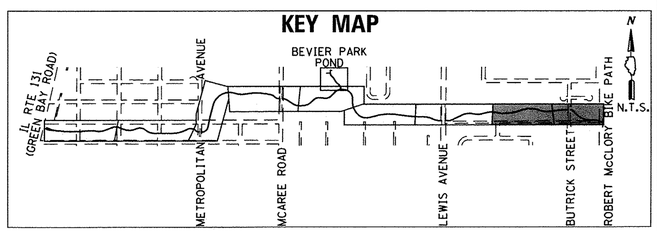


LAKE COUNTY FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = 4905-xx05-erosion control.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED - 11/9/2016
GHA# 4905.000		DRAWN - PJS	REVISED -
PnP.01	PLOT SCALE = 1:50	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

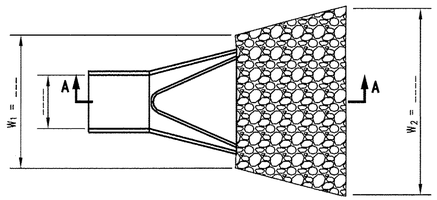
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
LYONS WOODS TRAIL

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. 84+00.00 TO STA. 103+62.13

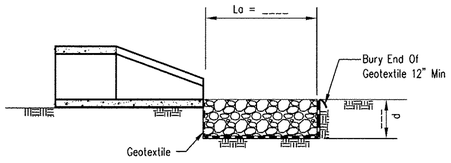
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	72
		CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			

Pipe Outlet To Flat Area
No Well-Defined Channel



PLAN

NOTES:
1. The rock riprap shall meet IDOT requirements for Gradation No. _____ , Quality Designation "A" or as designated by engineer.
2. Geotextile (non-woven) minimum criteria:
   Weight of Geotextile (oz/sq.yd.)_____6
   Tensile strength (lb) ASTM D 4632_____180
   Elongation at failure (%) ASTM D 4632_____≥ 50
   Puncture (lb) ASTM D 4833_____80
   Ultraviolet light (% residual tensile strength) ASTM D 4355_____min 70
   Apparent opening size (AOS) ASTM D 4751_____max 40 sieve
   Permittivity sec-^{1} ASTM D 4491_____min 0.70
3. Any geotextile splices shall overlap a minimum of 18 inches, with upstream or upslope geotextile overlapping the abutting downslope geotextile.
4. Apron width W_1 shall be at least 3 times the culvert pipe diameter. Apron width W_2 shall be at least to L_a plus the pipe diameter.
5. Rock thickness d shall be at least 1.5 times the riprap D_{100} size.
6. Apron length L_a and rock riprap shall be sized according to Illinois Urban Manual Rock Outlet Protection standard 910 minimum L_a = 10 ft.



SECTION A-A

Date
Drawn
Checked
Approved

PIPE OUTLET TO FLAT AREA

NRCS Natural Resources Conservation Service, United States Department of Agriculture

File No.
IL-ENG-44
Drawing No.

Sheet 1 of 1

Structure No.	Type	Pipe Dia. (inch)	Tailwater	Maximum Pipe Velocity (fps)	Rock Gradation	Blanket Thickness (in)	Apron Length La (feet)	Apron Width (feet) Upstream end (W1)	Apron Width (feet) Downstream end (W2)	Area (sq.yard)
1A	Outlet	18	Minimum	5	No. 4	15	14	4.5	15.5	15.6
2A	Outlet	18	Minimum	5	No. 4	15	14	4.5	15.5	15.6
3A	Outlet	18	Minimum	10	No. 4	20	16	4.5	17.5	19.6
4A	Outlet	18	Minimum	10	No. 4	20	16	4.5	17.5	19.6
5A	Channel Outlet	12	Maximum	5	No. 4	15	12	7.0	7.0	9.3
6A	Channel Outlet	12	Maximum	5	No. 4	15	12	7.0	7.0	9.3
7A	Channel Outlet	12	Maximum	5	No. 4	15	12	7.0	7.0	9.3
8A	Channel Outlet	12	Maximum	5	No. 4	15	12	7.0	7.0	9.3
12A	Outlet	15	Minimum	10	No. 4	20	16	3.8	17.3	18.7
13A	Outlet	15	Minimum	10	No. 4	20	16	3.8	17.3	18.7
14A	Outlet	15	Minimum	10	No. 4	20	16	3.8	17.3	18.7
17A	Outlet	12	Minimum	10	No. 4	15	10	3.0	11.0	7.8
18A	Outlet	12	Minimum	10	No. 4	15	10	3.0	11.0	7.8
19A	Outlet	18	Minimum	10	No. 4	15	10	4.5	11.5	8.9
23A	Outlet	12	Minimum	10	No. 4	15	12	3.0	13.0	10.7
24A	Outlet	12	Minimum	5	No. 4	15	10	3.0	11.0	7.8
26A	Outlet	15	Minimum	10	No. 4	20	16	3.8	17.3	18.7
									Total Area =	224.3

Notes:
1. Rip rap sizing is based on Code 910 of Illinois Urban Manual.
2. Rock Gradation is determined by pipe diameter and tailwater condition. (Gradation # references IDOT SSRB Art 281.04a)
3. Apron Length is determined from Table 2 of Code 910 of Illinois Urban Manual, according to tailwater condition and the outlet velocity.
4. Apron Width at Upstream End is three times the pipe diameter for pipes discharging on to a flat area with no defined channels.
5. Apron Width at Downstream End: with minimum tailwater conditions: (pipe diameter + La)
   with maximum tailwater conditions: (pipe diameter + 0.4La)

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION
SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION NOTES

A. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

B. FOR THOSE DEVELOPMENTS THAT REQUIRE A DESIGNATED EROSION CONTROL INSPECTOR (DECI), INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
- UPON COMPLETION OF SEDIMENT AND RUNOFF CONTROL MEASURES (INCLUDING PERIMETER CONTROLS AND DIVERSIONS), PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
- AFTER EVERY SEVEN (7) CALENDAR DAYS OR STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.

C. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

D. A STABILIZED MAT OF CRUSHED STONE MEETING IDOT GRADATION CA-1 UNDERLAIN WITH FILTER FABRIC AND IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, OR OTHER APPROPRIATE MEASURE(S) AS APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

E. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN.

F. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE OR REDISTURBANCE.

G. ALL STOCKPILES SHALL HAVE APPROPRIATE MEASURES TO PREVENT EROSION. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS OR WETLANDS AND DESIGNATED BUFFERS.

H. SLOPES STEEPER THAN 3H:1V SHALL BE STABILIZED WITH APPROPRIATE MEASURESAS APPROVED BY THE ENFORCEMENT OFFICER.

I. APPROPRIATE EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN THE NORMAL WATER LEVEL AND HIGH WATER LEVEL.

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

K. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DISCHARGES SHALL BE ROUTED THROUGH AN APPROVED ANIONIC POLYMER DEWATERING SYSTEM OR A SIMILAR MEASURE AS APPROVED BY THE ENFORCEMENT OFFICER. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE ENFORCEMENT OFFICER, OR APPROVED REPRESENTATIVE, MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.

L. IF INSTALLED SOIL EROSION AND SEDIMENT CONTROL MEASURES DO NOT MINIMIZE SEDIMENT LEAVING THE DEVELOPMENT SITE, ADDITIONAL MEASURES SUCH AS ANIONIC POLYMERS OR FILTRATION SYSTEMS MAY BE REQUIRED BY THE ENFORCEMENT OFFICER.

M. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.

N. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

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

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LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

TYPICAL CONSTRUCTION SEQUENCING

1.) Installation of soil erosion and sediment control SE/SC measures
   a.) Selective vegetation removal for silt fence installation
   b.) Silt fence installation
   c.) Construction fencing around areas not to be disturbed
   d.) Stabilized construction entrance

2.) Tree removal where necessary (clear & grub)

3.) Construct sediment trapping devices (sediment traps, basins…)

4.) Construct detention facilities and outlet control structure with restrictor & temporary perforated riser

5.) Strip topsoil, stockpile topsoil and grade site

6.) Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)

7.) Install storm sewer, sanitary sewer, water and associated inlet & outlet protection

8.) Permanently stabilize detention basins with seed and erosion control blanket

9.) Temporarily stabilize all areas including lots that have reached temporary grade

10.) Install roadways

11.) Permanently stabilize all outlot areas

12.) Install structures and grade individual lots

13.) Permanently stabilize lots

14.) Remove all temporary SE/SC measures after the site is stabilized with vegetation

* Soil erosion and sediment control maintenance must occur every two weeks and after every ½ or greater rainfall event

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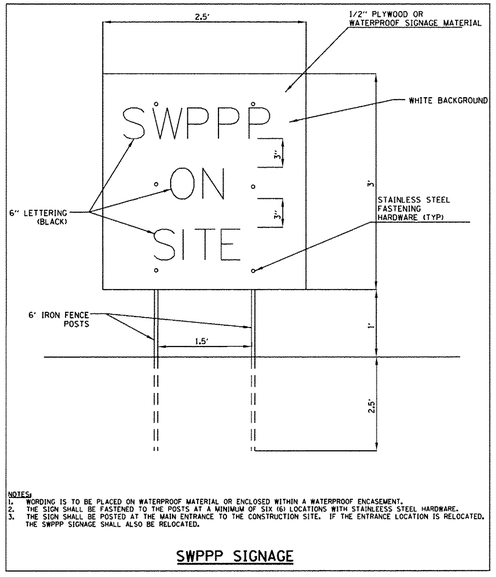
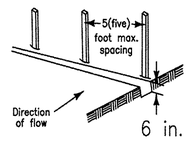


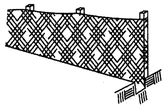
NOTES:
1. WORDING IS TO BE PLACED ON WATERPROOF MATERIAL OR ENCLOSED WITHIN A WATERPROOF ENCASEMENT.
2. THE SIGN SHALL BE FASTENED TO THE POSTS AT A MINIMUM OF SIX (6) LOCATIONS WITH STAINLESS STEEL HARDWARE.
3. THE SIGN SHALL BE POSTED AT THE MAIN ENTRANCE TO THE CONSTRUCTION SITE. IF THE ENTRANCE LOCATION IS RELOCATED, THE SWPPP SIGNAGE SHALL ALSO BE RELOCATED.

SWPPP SIGNAGE

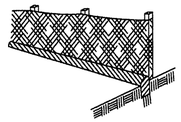
1. Set posts and excavate or slit-trench a 6-inch deep trench upslope along the line of the post



2. Attach the geotextile filter fabric to each post with a minimum of 3 (three) fasteners per post and extend to the bottom of the trench. Acceptable fasteners include staples, zip ties, or wire ties

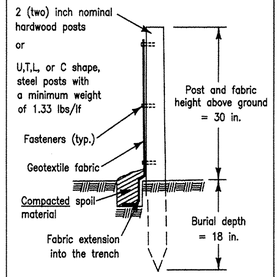


3. Backfill and compact the excavated spoil materials



Geotextile Requirement	Test Method	MARV
Grab strength - Machine direction - X-machine direction	ASTM D 4632	 550 N 450 N
Permittivity	ASTM D 4491	0.05 sec-1
Apparent opening size*	ASTM D 4751	0.60 mm
Ultraviolet stability (retained strength)	ASTM D 4355	70% after 500 hours

Note:
Value for apparent opening size represents maximum average roll value.



SILT FENCE DETAIL

DATE: 4/21/08 BY: KAW
REVISED: BY:

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

LAKE COUNTY FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = 4905-xx06sesc details.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED - 11/9/2016
GHA# 4905.000		DRAWN - PJS	REVISED -
SESC DETAILS-1	PLOT SCALE = 1:1	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

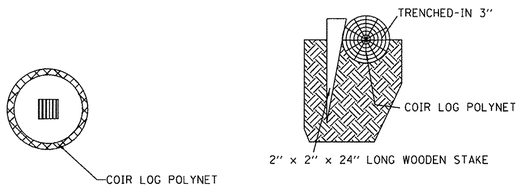
LCSMC SOIL EROSION AND SEDIMENT CONTROL DETAILS
LYONS WOODS TRAIL

SCALE: N.T.S. | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	73
		CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			

PLAN VIEW

SECTION VIEW



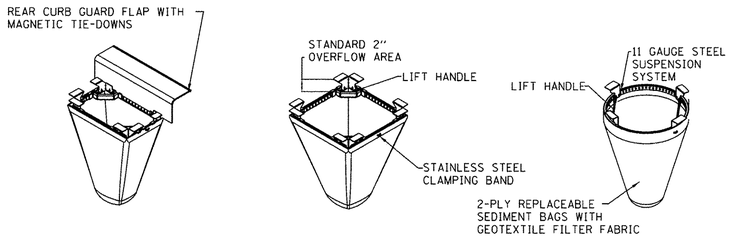
DROP INLET OR MANHOLE
INLET PROTECTION FOR DROP INLETS OR MANHOLES

• USE 9LB DENSITY 12" DIAMETER, 20' LONG COIR LOG POLYNET FOR STANDARD CIRCULAR DRAINAGE STRUCTURES. PLACE THE COIR LOG AROUND THE STRUCTURE AND JOIN THE ENDS TOGETHER WITH COIR TWINE. USE 2"x2"x24" WOODEN STAKES SPACED 3' APART TO HOLD DOWN LOG POLYNET.

NOTES:
1. DO NOT SCALE DRAWING.
2. REFER TO MANUFACTURER'S PRODUCT SPECIFICATIONS TO ENSURE QUALITY OF THE PRODUCTS

MAINTENANCE
1. CLEAN OUT SEDIMENT BEHIND LOG WHEN ½ FULL
2. RESECURE LOOSE LOGS
3. REPLACE LOGS AS NEEDED
4. REMOVE WHEN NOT NEEDED

COIR ROLL DETAIL INLET PROTECTION



TYPICAL CURB BOX INLET FILTER

TYPICAL FLAT/RECTANGULAR/ROLLED CURB INLET FILTER

TYPICAL ROUND INLET FILTER

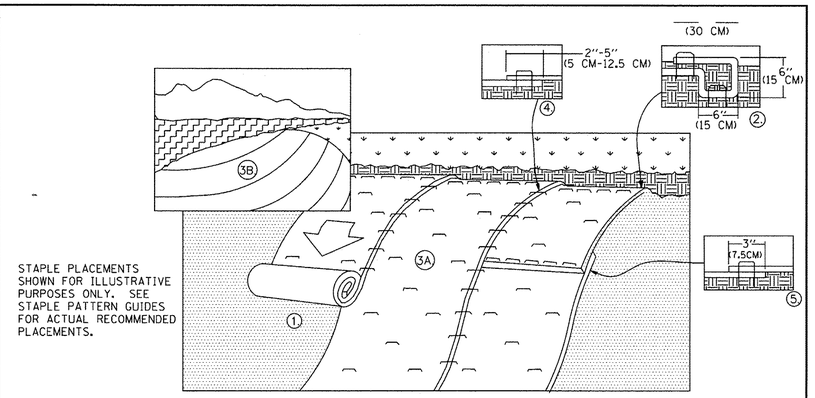
ACCEPTABLE MANUFACTURER'S AS LISTED BELOW 1. INLET & PIPE PROTECTION, INC. Naperville, IL 60564 847 722-0690

2. MARATHON MATERIALS, INC. Plainfield, IL 60544 800-983-9493

MAINTENANCE
1. CLEAN OUT AFTER EVERY RAIN EVENT

Material Property	Test Method	Value (min. ave.)	
> Inner Filter Bag Specs (2ft² min vol)		Non-Woven	Woven Mono
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4535	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Premittivity	ASTM D 4491	2.0/sec.	2.1/sec
Water Flow Rate	ASTM D 4491	145 gpm/sqft.	145gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/-15%	
Thickness	ASTM D 1777	.040 +/- .005	
> Frame Construction			
A36 Structural Steel; 11 Gauge, Zinc Plated	ASTM A 576	Tensile Strength > 58,000 psi Yield Strength > 36,000 psi	

INLET FILTER BASKET DETAIL



STAPLE PLACEMENTS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE STAPLE PATTERN GUIDES FOR ACTUAL RECOMMENDED PLACEMENTS.

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP WIDTH.

NOTE:
•IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

EROSION CONTROL BLANKET SLOPE INSTALLATION

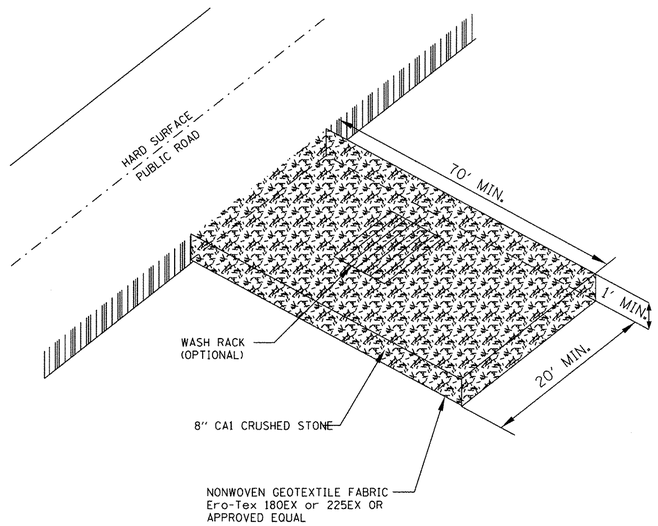
Stabilization Type:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Perm. Seeding			A			X X X	X X X	X				
Dormant Seeding	B											
Temp. Seeding			C			X X X	X X X	X				
Sodding			E X X	X								
Mulching	F											

A = KENTUCKY BLUEGRASS @ 90 LBS/AC. MIXED WITH PERENNIAL RYEGRASS @ 30 LBS/AC.
B = KENTUCKY BLUEGRASS @ 135 LBS/AC. MIXED WITH PERENNIAL RYEGRASS @ 45 LBS/AC.
C = SPRING OATS @ 100 LBS/AC.
D = WHEAT OR CEREAL RYE @ 150 LBS/AC.
E = SOD
F = STRAW MULCH (HYDROMULCH OR USE STRAW BLANKET) @ 2 TONS/AC.
XXX = IRRIGATION NEEDED

IRRIGATION SHOULD BE PROVIDED AS NECESSARY TO THOROUGHLY ESTABLISH INTENDED GROWTH.

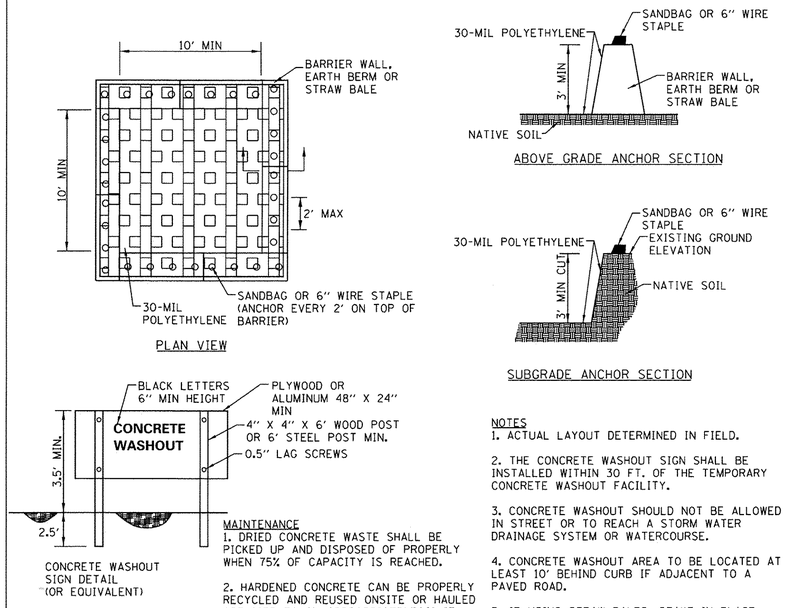
NOTE:
SPRAYED ON PRODUCTS CANNOT BE USED NOV.-FEB.

TYPICAL SOIL PROTECTION CHART



NOTE:
IF WASH RACKS ARE USED THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

STABILIZED CONSTRUCTION ENTRANCE



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

MAINTENANCE
1. DRIED CONCRETE WASTE SHALL BE PICKED UP AND DISPOSED OF PROPERLY WHEN 75% OF CAPACITY IS REACHED.

2. HARDENED CONCRETE CAN BE PROPERLY RECYCLED AND REUSED ONSITE OR HAULED OFF-SITE TO AN APPROPRIATE FACILITY.

NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.

2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

3. CONCRETE WASHOUT SHOULD NOT BE ALLOWED IN STREET OR TO REACH A STORM WATER DRAINAGE SYSTEM OR WATERCOURSE.

4. CONCRETE WASHOUT AREA TO BE LOCATED AT LEAST 10' BEHIND CURB IF ADJACENT TO A PAVED ROAD.

5. IF USING STRAW BALES, STAKE IN PLACE USING (2) 2"X2"X4' WOODEN STAKES.

6. STRAW BALES SHALL BE TRENCHED IN 3".

CONCRETE WASHOUT

LAKE COUNTY FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = 4905-xx07sesc details.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED -
GHA# 4905.000		DRAWN - PJS	REVISED -
SESC DETAILS-2	PLOT SCALE = 1:1	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

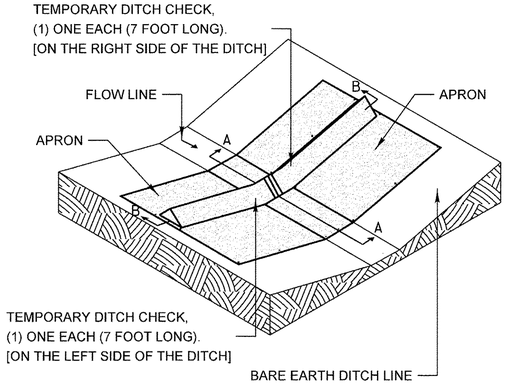
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LCSMC SOIL EROSION AND SEDIMENT CONTROL DETAILS
LYONS WOODS TRAIL

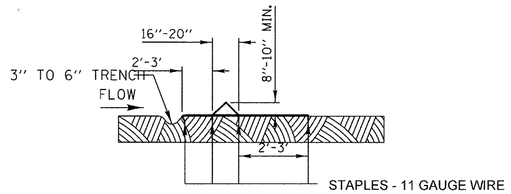
SCALE: N.T.S. | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	74
		CONTRACT NO. 61C67		
		ILLINOIS FED. AID PROJECT		

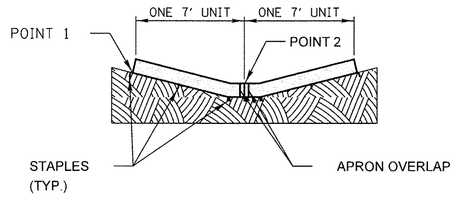
FOR BARE EARTH APPLICATION ONLY



SILT DIKE UNIT
ISOMETRIC



SECTION A-A



SECTION B-B

NOTES:
THE TEMPORARY DITCH CHECK SHALL BE USED IN BARE EARTH DITCH LINES AND SHALL BE REMOVED JUST PRIOR TO THE INSTALLATION OF EROSION CONTROL BLANKET AND SEEDING.

THE INSTALLATION SHOWN WILL BE MEASURED AND PAID FOR AS A TEMPORARY DITCH CHECK 14 FEET IN LENGTH.

STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAM.

POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

REVISIONS	DATE
ADDED DIMENSIONS	04/11/08
REVISED PAY ITEM	04/15/10
ADDED PLASTIC BERM (pg2)	10/10/12

LakeCounty Division of Transportation

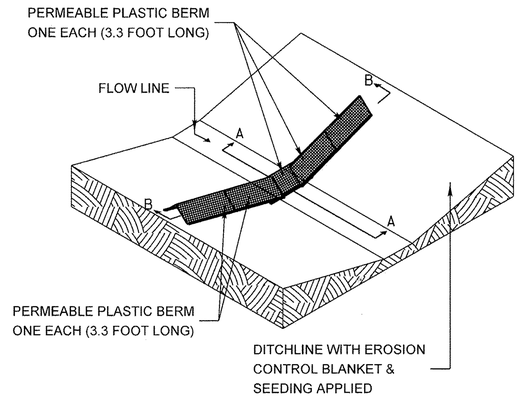
APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

TEMPORARY DITCH CHECK INSTALLATION FOR ROADWAY OR DRAINAGE DITCH

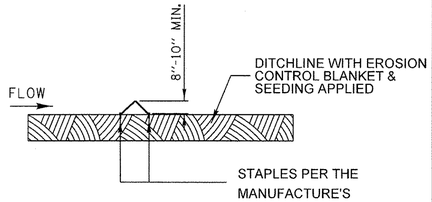
(SHEET 1 OF 2)

LC2050

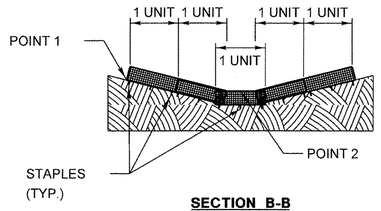
FOR USE WHILE ESTABLISHING FINAL LANDSCAPING



PERMEABLE PLASTIC BERM
ISOMETRIC



SECTION A-A



SECTION B-B

NOTES:
THE PERMEABLE PLASTIC BERM SHALL REPLACE THE TEMPORARY DITCH CHECK AFTER THE INSTALLATION OF EROSION CONTROL BLANKET AND SEEDING.

EACH PERMEABLE PLASTIC BERM IS 3.3 FEET IN LENGTH. THE MINIMUM INSTALLATION IN A DITCH SHALL BE THREE UNITS. THE INSTALLATION SHOWN WILL BE MEASURED AND PAID FOR AS A PERMEABLE PLASTIC BERM 16.5 FEET IN LENGTH (5 UNITS).

STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS THROUGH OR OVER THE BERM AND NOT AROUND THE ENDS.

REVISIONS	DATE
ADDED DIMENSIONS	04/11/08
REVISED PAY ITEM	04/15/10
ADDED PLASTIC BERM (pg2)	10/10/12

LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

TEMPORARY DITCH CHECK INSTALLATION FOR ROADWAY OR DRAINAGE DITCH

(SHEET 2 OF 2)

LC2050

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = 4905-xx08sesc details.dgn	USER NAME = MColeman	DESIGNED - MKH	REVISED -
GHA# 4905.000 Details.04		DRAWN - PJS	REVISED -
	PLOT SCALE = 1:1	CHECKED - DJS	REVISED -
	PLOT DATE = 11/14/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LCSMC SOIL EROSION AND SEDIMENT CONTROL DETAILS
LYONS WOODS TRAIL

SCALE: N.T.S. | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	75
		CONTRACT NO. 61C67		
	ILLINOIS FED. AID PROJECT			

BenchMark: NGS LAK 131 IA, Stainless steel rod in sleeve. Access to datum point is through a 6" diameter cap. Station is located 230 ft South of Suddard St., 101 feet North of Center St., 36.5 feet East of the Centerline of Green Bay Road (IL Rte. 131). Elevation 721.38 (NAVD 88).

Existing Structure: None

INDEX OF SHEETS

WATERWAY INFORMATION

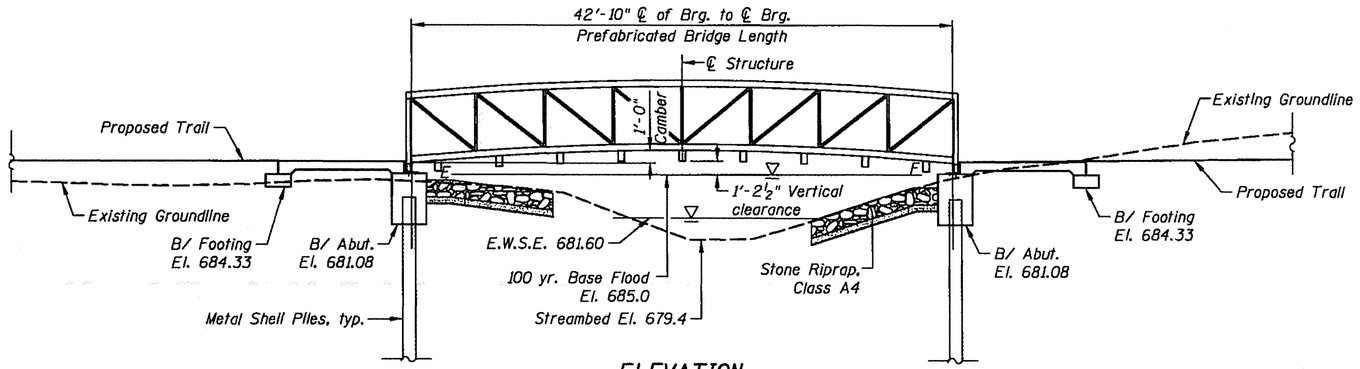
Drainage Area = 0.864 Sq. mi Low Grade Elev. 686.5 @ Sta. 55+70 (proposed)

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	146	N/A	58	683.6	0.0	0.0	683.6	683.6
Design	50	288	N/A	92	684.6	0.0	0.0	684.6	684.6
Base	100	387	N/A	107	685.0	0.0	0.0	685.0	685.0
Max. Calc.	200	509	N/A	120	685.3	0.0	0.1	685.3	685.4
Overtopping									

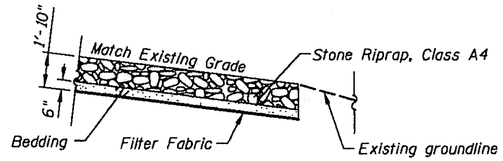
10-Year Existing Velocity = 2.5 fps
10-Year Proposed Velocity = 2.5 fps

DESIGN SCOUR ELEVATION TABLE

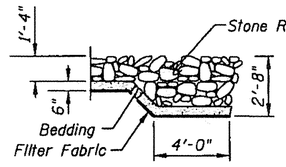
Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	681.08	681.08



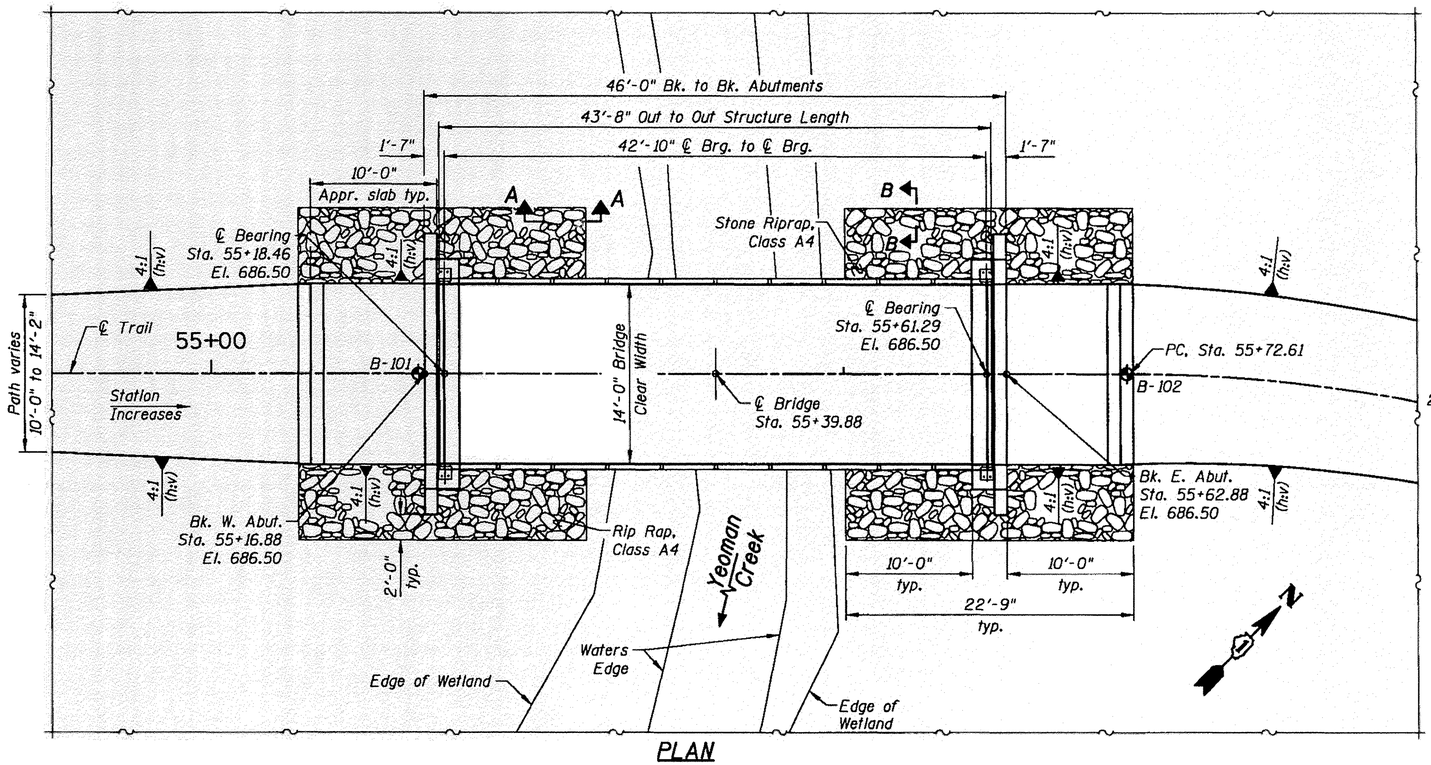
ELEVATION



SECTION A-A



SECTION B-B



PLAN

CIVILTECH ENGINEERING, INC.
GREGORY J. HATLESTAD, S.E.

STATE OF ILLINOIS · GREGORY J. HATLESTAD · 081-005562 · LICENSED STRUCTURAL ENGINEER · CHICAGO

GREGORY J. HATLESTAD, S.E.
081-005562

EXP 11-30-2016

DATE 10-17-2016

I certify that to the best of knowledge, information, and belief, this bridge 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 for Highway Bridges.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 Interims
2009 AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition

DESIGN LOADING

Pedestrian Live Load (PL) 90 psf
H-10 Truck (20,000 lbs)

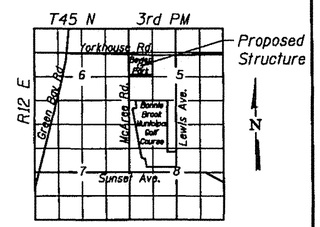
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (C.I.P. concrete)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

CLASSIFICATION

Pedestrian/Bicycle Bridge



LOCATION SKETCH

GENERAL PLAN & ELEVATION
LYONS WOODS TRAIL OVER YEOMAN CREEK
SECTION 14-F3000-04-BT
LAKE COUNTY
STATION 55+39.88

CIVILTECH
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CHECKED	GJH	REVISED	-
DATE	10/17/2016	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE GENERAL PLAN & ELEVATION
LYONS WOODS TRAIL
SHEET NO. 1 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	76
		CONTRACT NO. 61C67		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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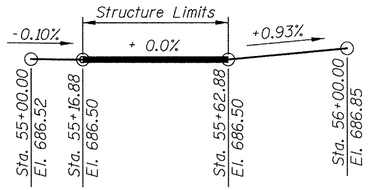
GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolt size shall be determined by the Contractor.
2. All structural steel shall be AASHTO M270 Grade 50W.
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. Concrete Sealer shall be applied to the bridge seat and front face of the approach slab.
6. All structural steel and exposed surfaces of bearings wihin a distance of 10 ft. each way from the deck joints shall be painted as specified in Section 506 of the Standard Specifications. The color of the final coat shall be Reddish Brown Munsell No. 2.5 YR 3/4.
7. Excavation for placement of riprap and filter fabric is included in the cost of Stone Riprap, Class A4.
8. The Contractor shall excavate layer of crushed concrete before commencing pile driving operations at south west abutment. See soil boring log 101 on sheet 60 of 101.

TRUSS MANUFACTURER

The substructure is designed per AASHTO LRFD and based on the assumed truss dead loads (including deck) shown under Bridge Reactions Table.
Bridge bearing seat elevations are subject to revision based on the approved pedestrian truss superstructure shop drawings. Contractor shall verify all dimensions and elevations with final shop drawings.
The truss manufacturer shall design and furnish all truss bearing anchor bolts.
Total factored superstructure dead load at each abutment = 17.000 LBS.



TRAIL PROFILE

TOTAL BILL OF MATERIAL

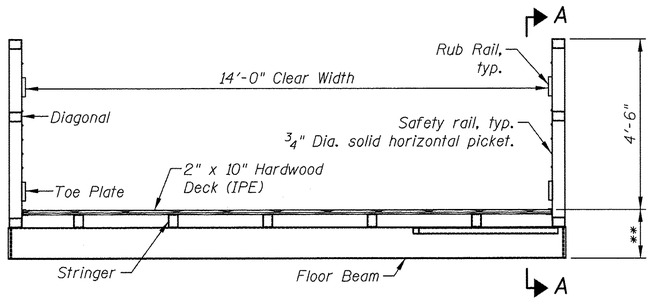
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	-	91	91
Filter Fabric	Sq. Yd.	-	91	91
Structure Excavation	Cu. Yd.	-	61	61
Concrete Structures	Cu. Yd.	-	18.5	18.5
Concrete Superstructure	Cu. Yd.	10.0	-	10.0
Protective Coat	Sq. Yd.	32	-	32
Reinforcement Bars, Epoxy Coated	Pound	1,220	1,800	3,020
Furnishing Metal Shell Piles 12" x 0.179"	Foot	-	84	84
Driving Piles	Foot	-	84	84
Test Pile Metal Shell	Each	-	2	2
Concrete Sealer	Sq. Ft.	-	120	120
Geocomposite Wall Drain	Sq. Yd.	-	20	20
Pedestrian Truss Superstructure	Sq. Ft.	644	-	644
Granular Backfill for Structures	Cu. Yd.	-	28	28
Pipe Underdrains for Structures, 4"	Foot	-	85	85

BRIDGE REACTIONS TABLE

LOAD (+Downward load, -Upward load)	P (LBS)	H (LBS)	L (LBS)
Dead Load	6,800	-	-
Uniform Live Load	13,950	-	-
Vehicle Load	10,000	-	-
Wind Uplift 20 PSF	-4,980	- -	- -
Wind	±685	3,680	-
Thermal	-	-	2,380

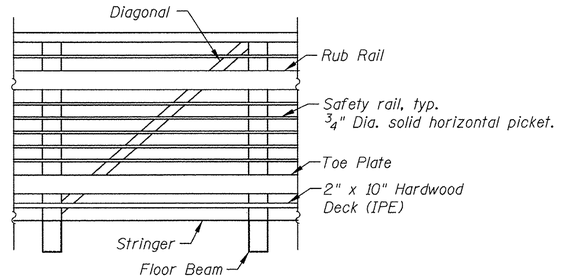
"P" - Vertical load each base plate (4 per bridge)
"H" - Horizontal load each footing (2 per bridge)
"L" - Longitudinal load each base plate (4 per bridge)

Bridge lifting weight: 27,200 LBS

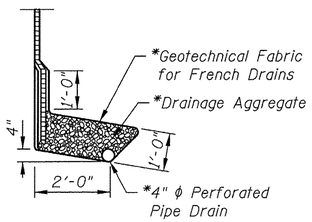


CROSS SECTION

** Truss Manufacturer to use a max. height of 1'-3½"

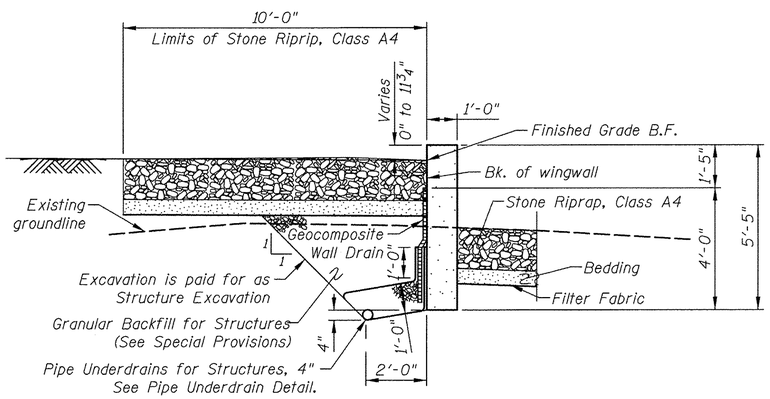


SECTION A-A

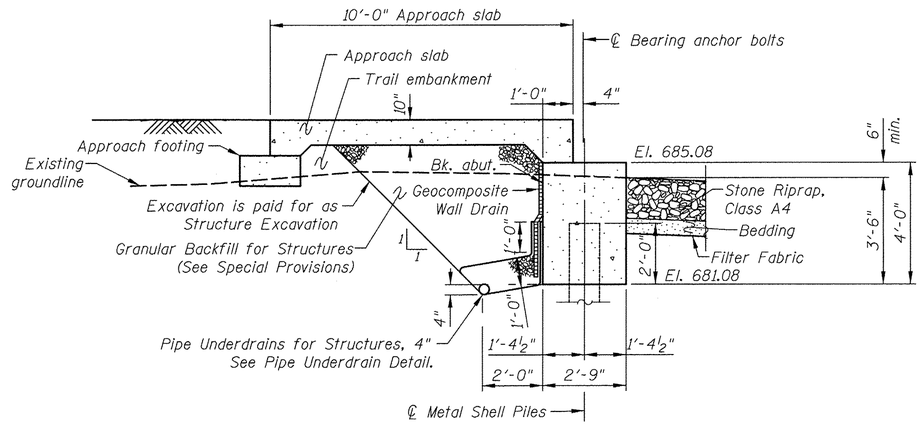


PIPE UNDERDRAIN DETAIL

* Included in the cost of Pipe Underdrains for Structures, 4"



SECTION THRU WINGWALL



SECTION THRU ABUTMENT

Note:
All drainage system components shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. Concrete headwalls included in the cost of Pipe Underdrains for Structures, 4". (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

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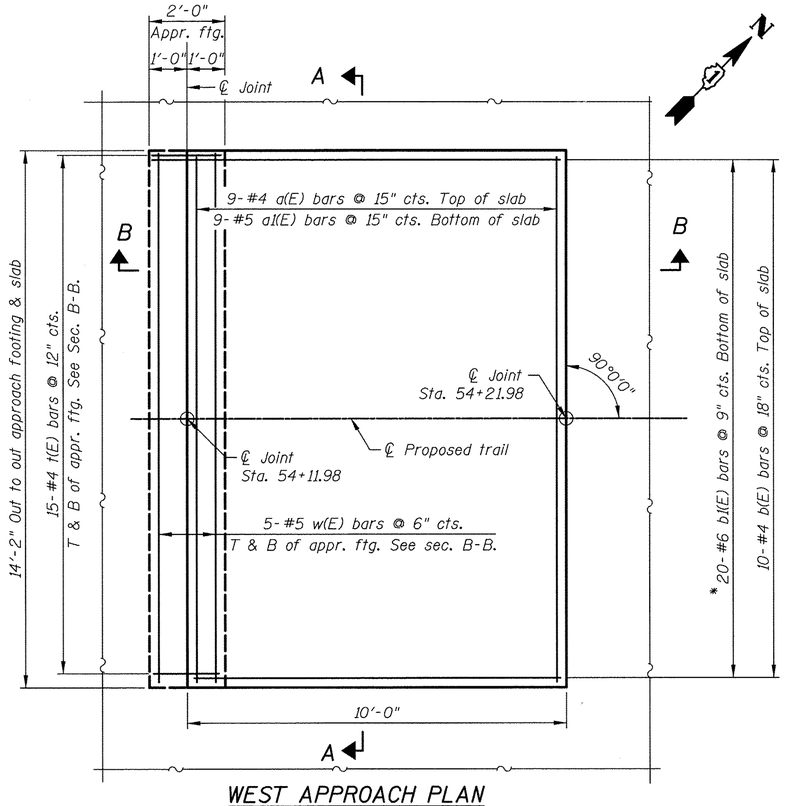
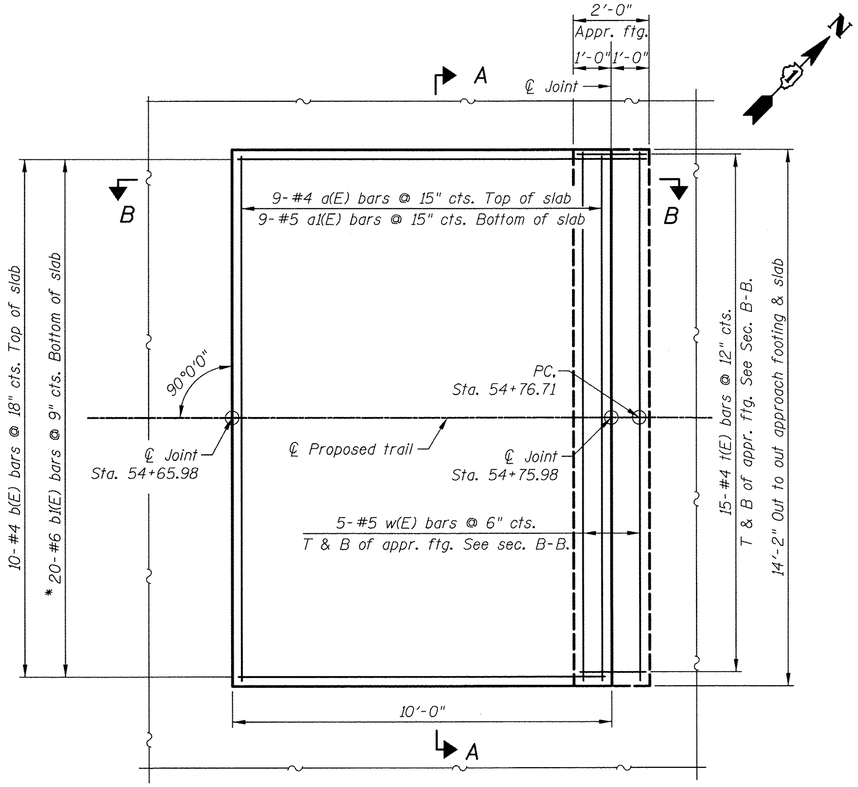
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE GENERAL DATA
LYONS WOODS TRAIL
SHEET NO. 2 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	77
		CONTRACT NO. 61C67		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



WEST APPROACH PLAN

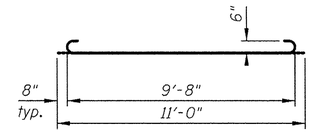


EAST APPROACH PLAN

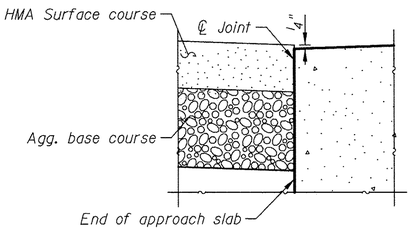
* Tilt #5 b1(E) bars as required to maintain clearance.

BILL OF MATERIAL
TWO APPROACHES

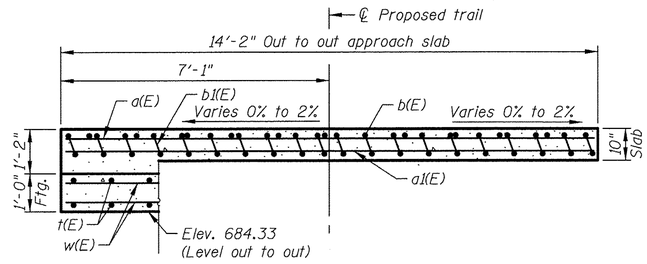
Bar	No.	Size	Length	Shape
a(E)	18	#4	13'-10"	——
a1(E)	18	#5	13'-10"	——
b(E)	20	#4	9'-8"	——
b1(E)	40	#6	11'-0"	⊂——⊃
t(E)	60	#4	1'-8"	——
w(E)	20	#5	13'-10"	——
Concrete Structures			Cu. Yd.	1.8
Concrete Superstructure			Cu. Yd.	10.0
Protective Coat			Sq. Yd.	32
Reinforcement Bars, Epoxy Coated			Pound	1,580



BAR b1(E)



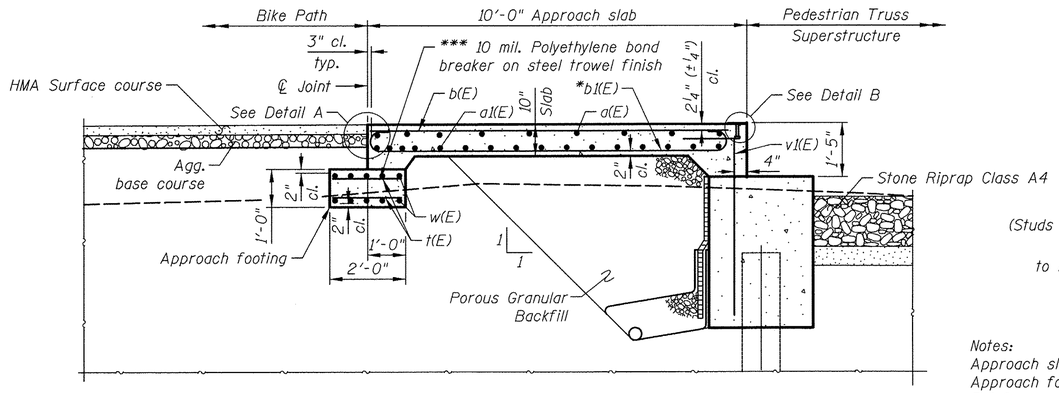
DETAIL A



AT APPROACH FOOTING NEAR ABUTMENT

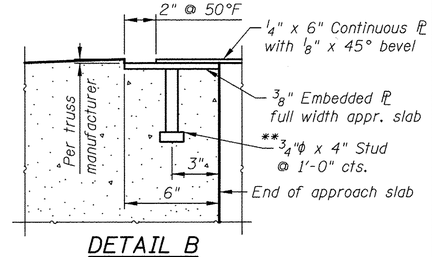
SECTION A-A

(See Plan for dimensions not shown)



SECTION B-B

*** Included in cost of Concrete Superstructure.



DETAIL B

(Studs and plates included in the cost of Concrete Superstructure)

** Granular or solid flux filled headed studs conforming to Article 100632 of the Std. Specs., automatically end welded.

Notes:
Approach slab concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures.
a(E) and a1(E) bar spacings measured along ℄ Rdwy.

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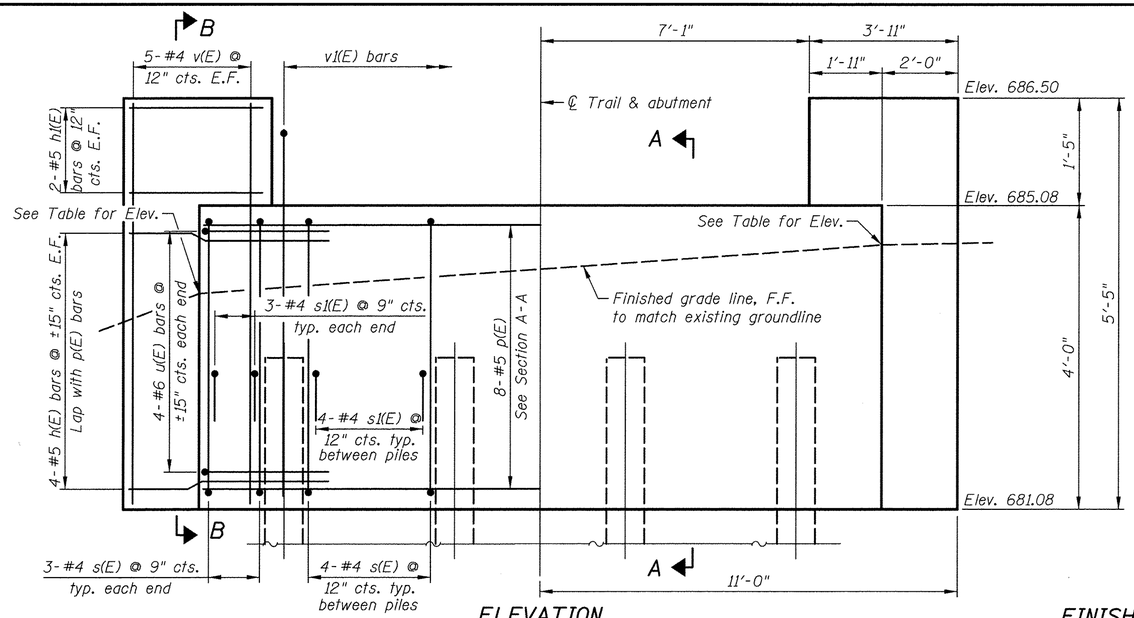
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

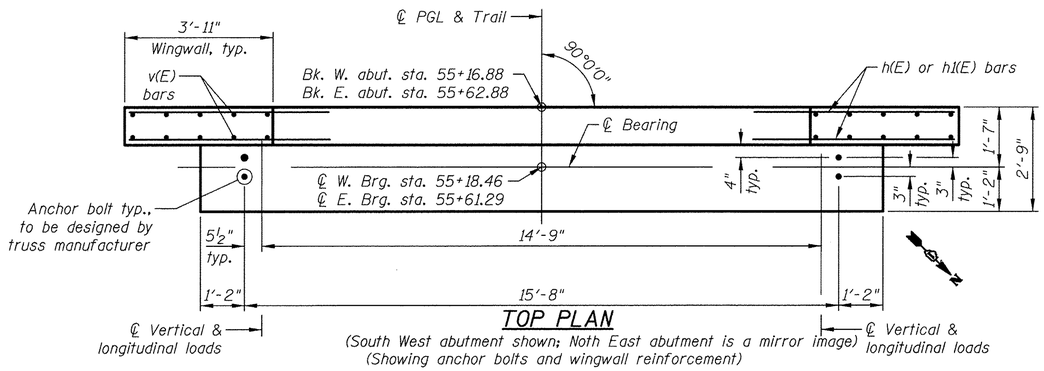
BRIDGE APPROACH SLAB DETAILS
LYONS WOODS TRAIL
SHEET NO. 3 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	78
		CONTRACT NO. 61C67		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



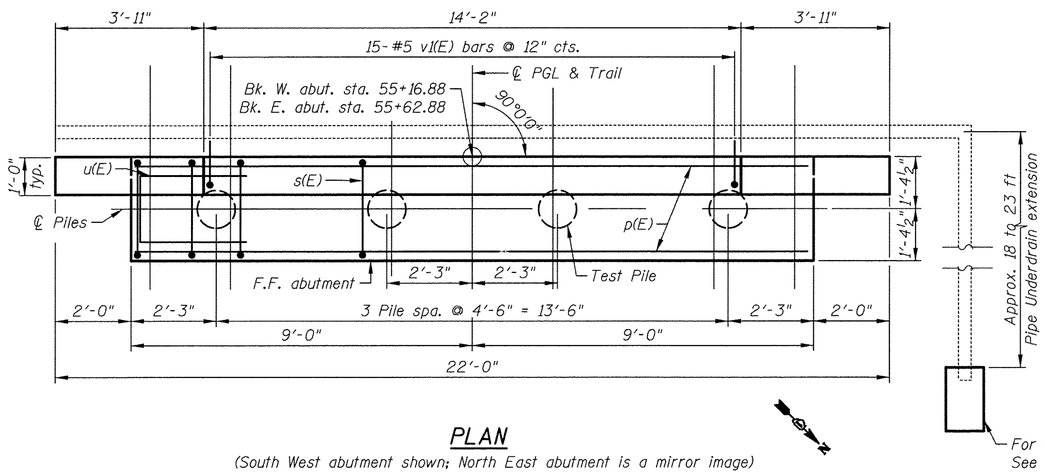
ELEVATION

SHOWING REINFORCEMENT (Looking at F.F. of abutment & wingwalls)) **SHOWING DIMENSIONS**



TOP PLAN

(South West abutment shown; Noth East abutment is a mirror image)
(Showing anchor bolts and wingwall reinforcement)

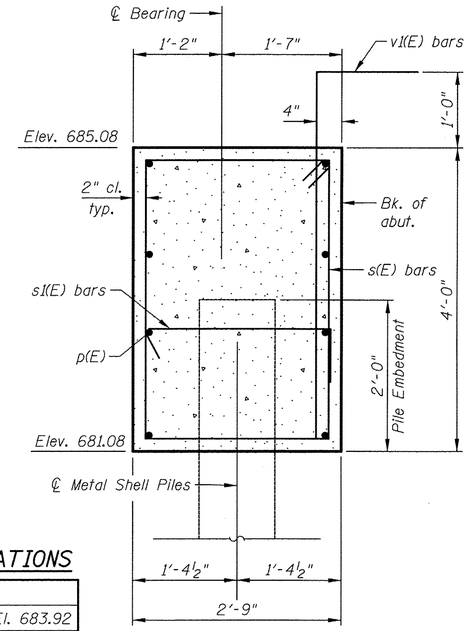


PLAN

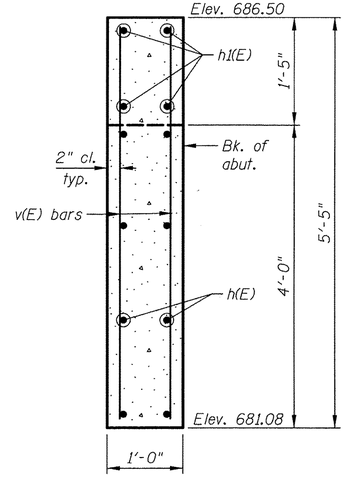
(South West abutment shown; North East abutment is a mirror image)

FINISHED GRADE ELEVATIONS

Abutment	Elevations	
SW Abut.	SW El. 684.56	SE El. 683.92
NE Abut.	NW El. 684.44	NE El. 684.79



SECTION A-A



SECTION B-B

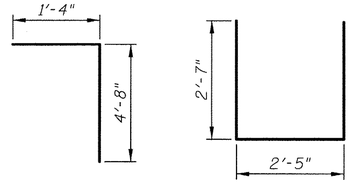
PILE DATA

Type: Metal Shell 12" ϕ x 0.179" walls
Nominal Required Bearing: 58 k
Factored Resistance Available: 32 k
Est. Length: 14'
No. Production Piles: 6
No. Test Piles: 2

BILL OF MATERIAL - TWO ABUTMENTS

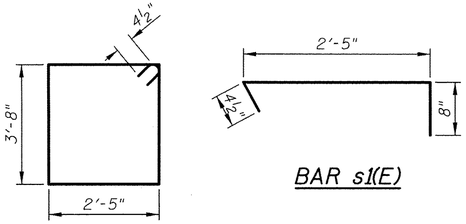
Bar	No.	Size	Length	Shape
h(E)	32	#5	5'-3"	
h1(E)	16	#5	3'-7"	
p(E)	16	#5	17'-8"	
s(E)	36	#4	12'-11"	
s1(E)	36	#4	3'-6"	
u(E)	16	#6	7'-7"	
v(E)	40	#4	5'-1"	
v1(E)	30	#5	6'-0"	
Structure Excavation		Cu. Yd.	61	
Concrete Structures		Cu. Yd.	18.5	
Reinforcement Bars, Epoxy Coated		Pound	1,440	
Furnishing Metal Shell Piles 12" x 0.179"		Foot	84	
Driving Piles		Foot	84	
Test Pile Metal Shell		Each	2	
Concreate Sealer		Sq. Ft.	120	
Geocomposite Wall Drain		Sq. Yd.	20	
Granular Backfill for Structures		Cu. Yd.	28	
Pipe Underdrain For Structures, 4"		Foot	85	

For details of piles see sheet 59 of 101.



BAR v1(E)

BAR u(E)



BAR s(E)

BAR s1(E)

MINIMUM LAP

#5 bar = 3'-3"

Notes:
1. Minimum pile embedment shall be 10'-0" per Structure Geotechnical Report.
2. Concrete clear cover shall be 2" minimum unless noted otherwise.
3. Space reinforcement bars in bearing seat to miss anchor bolts. Cost of anchor bolts included with Pedestrian Truss Superstructure.
4. All exposed concrete edges shall have a ¾" x 45°chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground level.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE ABUTMENT DETAILS
LYONS WOODS TRAIL
SHEET NO. 4 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	79
		CONTRACT NO. 61C67		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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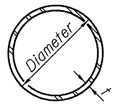
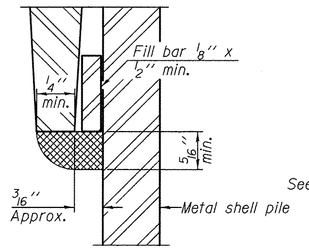
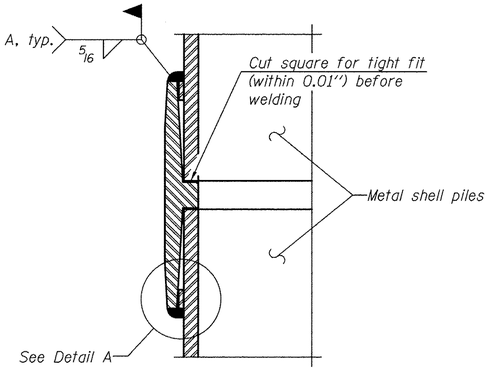


METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume ($yd.^3$/ft.)
PP12	0.179″	22.60	0.0274
PP12	0.250″	31.37	0.0267
PP14	0.250″	36.71	0.0368
PP14	0.312″	45.61	0.0361

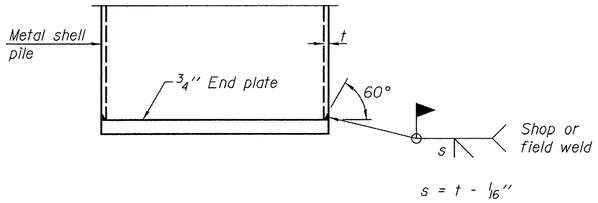


DETAIL A

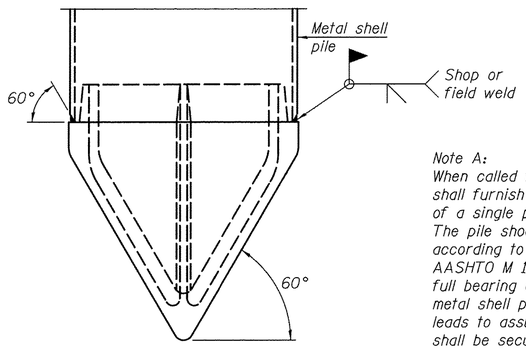


Notes:
The 1/8″ x 1/2″ min. fill bar may be constructed of 2 bars with a 1/8″ max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



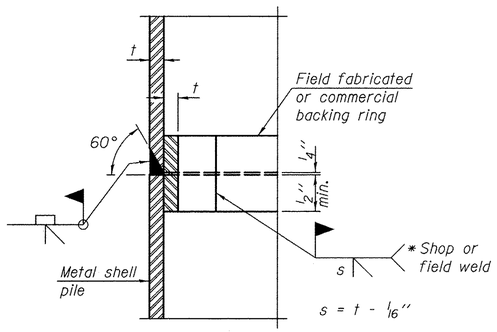
END PLATE ATTACHMENT



Note A:
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

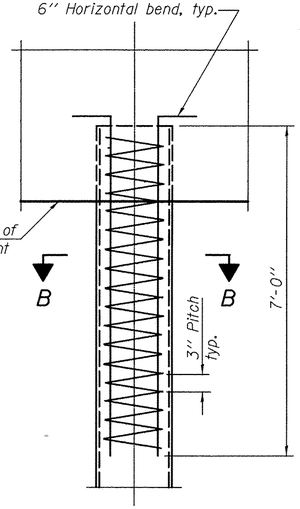
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

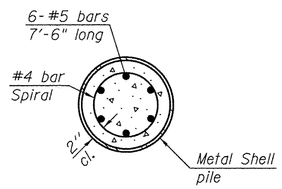


COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

Note:
The metal shell piles shall be according to ASTM A 252 Grade 3.

F-MS 1-27-12

CIVILTECH
450 E Devon Ave, Suite 300
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.com

DRAWN - JTS	REVISED -	
DESIGNED - JTS	REVISED -	
CHECKED - GJH	REVISED -	
DATE - 10/17/2016	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE METAL SHELL PILE DETAILS
LYONS WOODS TRAIL
SHEET NO. 5 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	80
		CONTRACT NO. 61C67		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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klk
10/17/2016

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 101

Logged By: DA **Page:** 1 of 1

Client: Lake County Forest Preserves

File No. 21912 **Date Drilled:** 2/13/15

Reference: Lyons Woods Trail
Waukegan/Beach Park, IL

Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 684.9' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ɣ	unconfined compressive strength ○
	Brown-dark brown silt,some clay,trace sand,gravel & roots,damp - Fill		19.6		
	Crushed concrete,damp,dense	41	6.4		
	Brown-dark brown silt,some clay,trace sand & gravel,damp,very loose - Fill				
5		3	21.4		
	Brown-dark brown-black clay,some silt, trace sand & gravel,damp,stiff - Fill	6	28.3	90.4	0.7
	(a) see below		54.7		
10	Brown-gray clay,some silt,trace sand,very damp-damp,stiff	4	27.1	93.5	0.8
		4	22.1	107.8	0.7
15	Gray clay,some silt,trace sand & gravel, damp,tough to hard	12	14.6	117.1	1.5
20		13	13.1	123.8	3.6
25		20	13.3	124.8	4.6
30		23	15.2	120.0	4.1
35		21	14.9	122.4	4.1
	Gray fine-medium sand,some coarse sand & gravel,very damp-saturated,medium dense				
40		24	16.2		

End of Boring

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0
× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40

(a) Black silt,some clay,trace sand,damp-very damp,very loose (topsoil)

Water encountered at 37.0 feet during drilling operations (W.D.).
Water recorded at 24.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 102

Logged By: DA **Page:** 1 of 1

Client: Lake County Forest Preserves

File No. 21912 **Date Drilled:** 2/13/15

Reference: Lyons Woods Trail
Waukegan/Beach Park, IL

Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 688.0' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ɣ	unconfined compressive strength ○
	(a) see below		22.5		
	Brown-dark brown silt,some clay,trace sand & gravel,damp,loose - Fill	6	17.4		
	(b) see below		27.3		
5	Brown clay,some silt,trace sand & gravel, damp,tough	10	21.2		
	Brown silt,some clay,trace sand,damp-very damp,loose	9	16.9		
10	Brown clay,some silt,trace sand & gravel, damp,hard	14	15.2	122.9	4.1
	Gray clay,some silt,trace sand & gravel, damp,very tough	7	23.2	104.8	3.0
15	Gray clay,some silt,trace sand & gravel, damp,tough to hard	7	16.2	121.3	1.3
20	Gray silt,some fine sand,trace clay,damp-very damp,medium dense	22	13.4 13.8	123.9	4.2
25	Gray clay,some silt,trace sand & gravel, damp,very tough	11	16.3	121.6	3.9
30		16	15.6	118.9	3.0
35	Gray fine-medium sand,some coarse sand & gravel,very damp-saturated,medium dense	17	18.3 16.1	116.7	2.5
40		20	13.5		

End of Boring

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0
× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40

(a) Dark brown silt,some clay,trace sand & roots,damp (topsoil) Fill-8"
(b) Dark brown silt,some clay,trace sand,damp,loose (topsoil)

Water recorded at 6.5 feet during drilling operations (W.D.).
Water recorded at 27.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

CIVILTECH
450 E Devon Ave, Suite 300
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.com

DRAWN - JTS	REVISED -	
DESIGNED - JTS	REVISED -	
CHECKED - GJH	REVISED -	
DATE - 10/17/2016	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE SOIL BORING LOGS
LYONS WOODS TRAIL
SHEET NO. 6 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	81
		CONTRACT NO. 61C67		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

klk 10/17/2016 11:31:26 AM J:\2899\Phase 2\CAD\06_SoilBorings.dgn

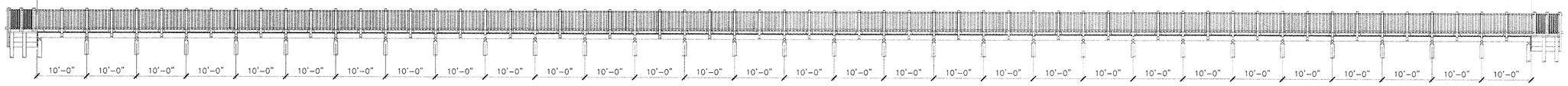
FINISH GRADE ELEVATION 653.00'

ABUTMENT BOARDS (3) — START OF BOARDWALK — BOARDWALK STATION 90+00

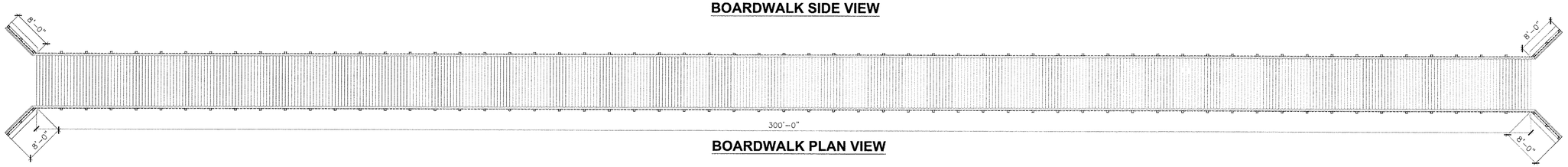
ABUTMENT BOARDS		WING WALL LENGTHS		
BOARDWALK		BOARDWALK		
ABUTMENT	# OF BOARDS	WING WALL	NORTH	SOUTH
STATION 90+00	(3)	STATION 90+00	8'-0"	8'-0"
STATION 93+00	(3)	STATION 93+00	8'-0"	8'-0"

FINISH GRADE ELEVATION 653.00'

END OF BOARDWALK — BOARDWALK STATION 93+00 — ABUTMENT BOARDS (3)



BOARDWALK SIDE VIEW



BOARDWALK PLAN VIEW

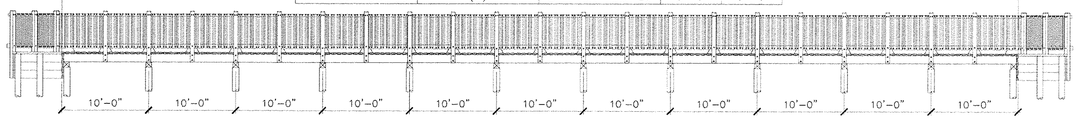
FINISH GRADE ELEVATION 650.58'

ABUTMENT BOARDS (3) — START OF BOARDWALK — BOARDWALK STATION 102+15

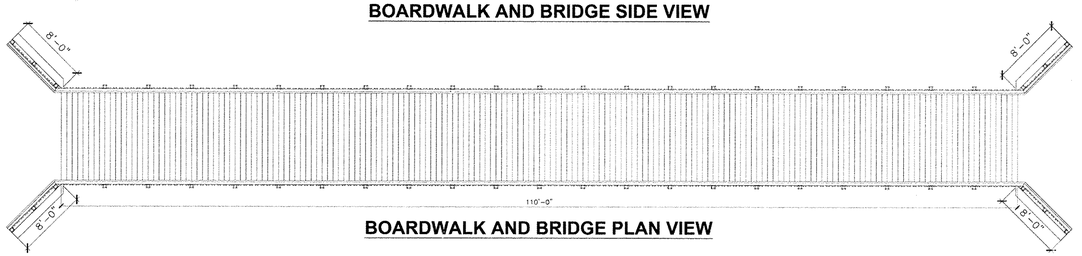
ABUTMENT BOARDS		WING WALL LENGTHS		
BOARDWALK		BOARDWALK		
ABUTMENT	# OF BOARDS	WING WALL	NORTH	SOUTH
STATION 102+15	(3)	STATION 102+15	8'-0"	8'-0"
STATION 103+25	(3)	STATION 103+25	8'-0"	8'-0"

FINISH GRADE ELEVATION 651.13'

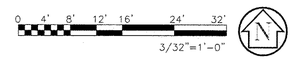
END OF BOARDWALK — BOARDWALK STATION 103+25 — ABUTMENT BOARDS (3)



BOARDWALK AND BRIDGE SIDE VIEW



BOARDWALK AND BRIDGE PLAN VIEW



GENERAL NOTES:

1. OWNER IS DEFINED AS THE LAKE COUNTY FOREST PRESERVE DISTRICT.
2. BOARDWALK CONSTRUCTION TO BE COMPLETED BY QUALIFIED AND EXPERIENCED CONTRACTOR APPROVED BY OWNER.
3. BOARDWALK SHALL BE DESIGNED FOR A MINIMUM UNIFORM LIVE LOAD OF 100 POUNDS PER SQUARE FOOT, OR 20,000 LB. (10) TON VEHICLE LOAD, WHICH INCLUDES IMPACT LOADING.
4. BOARDWALK CONTRACTOR WILL PERFORM ALL WORK FROM DECK LEVEL. ALL FOOT TRAFFIC WILL BE CONTAINED WITHIN SIX FEET FROM BOARDWALK PATH.
5. BOARDWALK CONTRACTOR WILL CLEAN UP EACH BOARDWALK WORK SITE DAILY, AND SHALL PROVIDE THE APPROPRIATE DUMPSTER FOR MATERIAL REMOVAL.
6. OWNER IS RESPONSIBLE FOR POSTING LOAD LIMITING SIGNS AND/OR BARRIERS AT EACH END OF BOARDWALK.

7. CONTRACTOR SHALL PROVIDE THE OWNER OPPORTUNITY TO INSPECT AND SIGN OFF FOR EACH BOARDWALK BEFORE AND AFTER CONSTRUCTION TO AGREE TO ALIGNMENT, ELEVATION, AND SATISFACTORY COMPLETION.

CONSTRUCTION NOTES:

TIMBER PILES: UNLESS OTHERWISE SPECIFIED,

8. TIMBER PILES SHALL BE SOUTHERN YELLOW PINE, CONFORMING TO ASTM STANDARD D-25 (LATEST EDITION) FOR QUALITY. SPECIFICATION FOR SIZE SHALL BE 1" TAPER IN 10 LINEAR FEET.
9. ALL PILING SHALL BE PRESSURE IMPREGNATED TO A MINIMUM OF .80 POUNDS PER CUBIC FOOT NET RETENTION OF CCA IN ACCORDANCE WITH AWPA STANDARD U1, COMMODITY SPECIFICATION (E), USE CATEGORY 4C.
10. HAND AUGERING IS NOT AN APPROVED PILE INSTALLATION METHOD.
11. PILES ARE REQUIRED TO BE DRIVEN TO REFUSAL AS DEFINED BY BOARDWALK DESIGNER.
12. UPON ENCOUNTERING DENSE SOIL OR OTHER SIMILAR SOIL CONDITIONS THAT PREVENT DRIVING PILING, THE AUGERING METHOD MAY BE UTILIZED TO ASSIST PILE DRIVING EQUIPMENT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE USE OF THE AUGERING METHOD TO DRIVE PILES. CONTRACTOR MAY VISIT SITE PRIOR TO BIDDING, TO ASSIST IN DETERMINING WHETHER THE AUGERING METHOD MAY BE REQUIRED.
13. IF PROPER BEARING CAPACITY IS NOT MET AT THE MINIMUM PILE DEPTH, PILINGS SHALL BE SPLICED AND DRIVEN UNTIL PROPER BEARING IS ACHIEVED. ALL STANDARD SPLICES MUST PROVIDE ENGINEERS CALCULATIONS AND STAMP. CONTRACTOR MAY VISIT SITE PRIOR TO BIDDING, TO ASSIST IN DETERMINING THE PROPER DEPTH OF PILINGS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DRIVING AND INSTALLING PILES DEEPER THAN MAY BE SHOWN ON THE DRAWINGS.

SAWN LUMBER: UNLESS OTHERWISE SPECIFIED,

14. ALL SAWN LUMBER SHALL BE SOUTHERN YELLOW PINE AND GRADED UNDER THE SOUTHERN PINE INSPECTION BUREAU (SPIB) RULES.
15. ALL SAWN LUMBER SHALL BE GRADE No. 1 OR BETTER, S4S (SURFACE FOUR SIDES).
16. FRAMING LUMBER AND TIMBERS SUCH AS BEAMS, STRINGERS, NAILERS, BRACING, BLOCKING, CURBS AND RAIL POSTS SHALL BE PRESSURE TREATED TO A MINIMUM 0.60 POUNDS PER CUBIC FOOT NET RETENTION OF CCA, AWPA STANDARDS.

    DECKING: SHALL BE PRESSURE TREATED TO A MINIMUM 0.60 POUNDS PER CUBIC FOOT NET RETENTION OF CCA, AWPA STANDARDS.

    RAILING COMPONENTS: TOP RAILS AND PICKETS SHALL BE PRESSURE TREATED TO A MINIMUM 0.06 POUNDS PER CUBIC FOOT NET RETENTION OF CA-C OR EQUAL IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARD U1, USE CATEGORY 3B, COMMODITY SPECIFICATION (A).
17. SPLICES OF STRUCTURAL MEMBERS MAY ONLY BE MADE OVER SUPPORTS. SPLICES BETWEEN SUPPORTS ARE PROHIBITED UNLESS OTHERWISE APPROVED BY THE ENGINEER. USE ONLY LONGEST LENGTHS OF MATERIALS AND JOIN ONLY WHERE SOLID FASTENING CAN BE MADE.
18. ALL OUTSIDE STRINGER SPLICES SHALL BE MADE WITH A 2"x12"x16" SCAB, WITH (2) 16d NAILS EACH END SIDE OF JOINT.
19. WHERE LUMBER IS SPECIFIED K.D.A.T., K.D.A.T. SHALL BE DEFINED AS KILN DRIED AFTER TREATMENT TO A 19% OR LESS MOISTURE CONTENT.
20. EXPOSED CORNERS SHALL BE BEVELED/ROUTERED AND SANDED TO REMOVE SPLINTERS/SHARP EDGES.

HARDWARE: UNLESS OTHERWISE SPECIFIED,

21. STEEL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A307-10.
22. METAL HARDWARE INCLUDING NAILS , BOLTS, NUTS, WASHERS, FASTENERS, STRAPS, AND CLIPS SHALL BE ZINC-COATED HOT DIPPED GALVANIZED STEEL MEETING THE REQUIREMENTS OF ASTM A153 AND/OR ASTM A653, G-185.

    DECKING:

23. DECKING SHALL BE BUTTED TIGHTLY BOARD TO BOARD TO ALLOW FOR BOARD SHRINKAGE AFTER DECK CONSTRUCTION.
24. DECKING TO BE ATTACHED WITH 305 STAINLESS STEEL OR BETTER SCREW RECESSED ¼" BELOW DECK SURFACE. PRE-DRILL ALL DECK SCREWS PRIOR TO INSTALLATION.
25. NO SPLICES SHALL BE ALLOWED FOR BOARDWALK DECKING.

    PICKETS:

26. ALL PICKETS TO BE PRE-DRILLED PRIOR TO INSTALLATION. ATTACH PICKETS WITH #10x3" STAINLESS STEEL OR BETTER SCREWS, RECESSED ⅛" BELOW PICKET SURFACE

GEOTEXTILE:

27. ABUTMENTS WILL USE MIRAFI 140NC NEEDLE PUNCHED, NON-WOVEN GEOTEXTILE, OR EQUAL.

GLU-LAM:

28. APA/EWS CERTIFIED MANUFACTURER IS REQUIRED FOR STRUCTURAL GLULAM COMPONENTS MEETING THE REQUIREMENTS OF ANSI/AITC A190.1 CODES AND THE IBC UNDER INTERNATIONAL ACCREDITATION SERVICES CERTIFICATION AA-649.
29. STRINGERS REQUIRE DSS SOUTHERN YELLOW PINE (SYP) 0.60 CCA OR EQUIVALENT (DSS DOUGLAS FIR (DF) 0.60 PENTA "A").
30. DECKING AND CAP-BEAM MEMBERS ARE MADE OF #1 SYP TREATED TO A .60 CCA. STRINGERS REQUIRE DSS SYP 0.60 CCA.
31. EACH SYP PLY IS INDIVIDUALLY TREATED BEFORE LAMINATION SO ENTIRE BEAM IS ACTUALLY FULLY TREATED THROUGHOUT FOR SYP CCA TREATMENT. EACH BEAM IS INDIVIDUALLY TREATED AFTER LAMINATION FOR DF PENTA "A" TREATMENT.
32. COMPONENTS ARE LAMINATED TOGETHER USING A 2 PART ADHESIVE. PUREBOND GT20 ADHESIVE AND A PUREBOND GT205 URETHANE ADHESIVE.
33. STRUCTURAL FINGER JOINTS ARE ADHERED WITH A 2 PART ADHESIVE ALSO MF2LM RESIN, AND A M320LY CATALYST.
34. ALL COMPONENTS ARE AN INDUSTRIAL GRADE.
35. 14.0% KDAT IS REQUIRED PRIOR TO LAMINATION.

LICENSED STRUCTURAL ENGINEER
JASON LAZZARA
062-064
STATE OF ILLINOIS

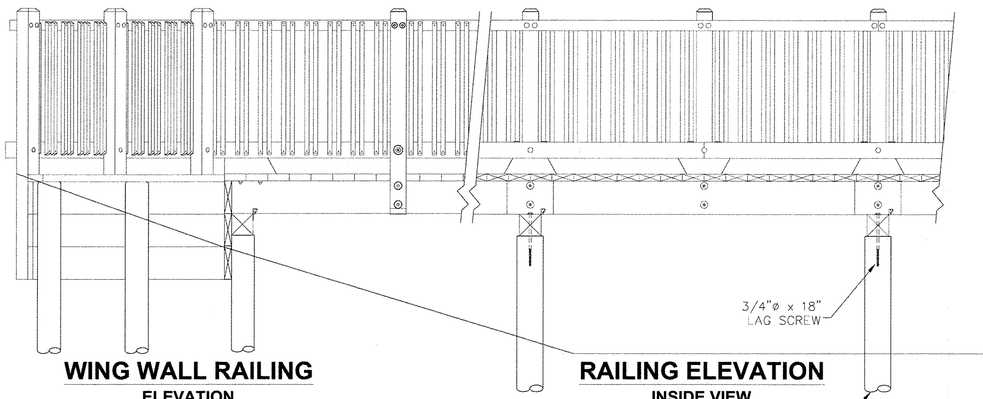
LYONS WOODS TRAIL
5 TON BOARDWALKS
AT
LAKE COUNTY
ILLINOIS

scale:	as shown
drawn:	C. THOMAS
checked:	D. HUGHES
approved:	D. HUGHES
date:	9-29-16
job no.:	92516

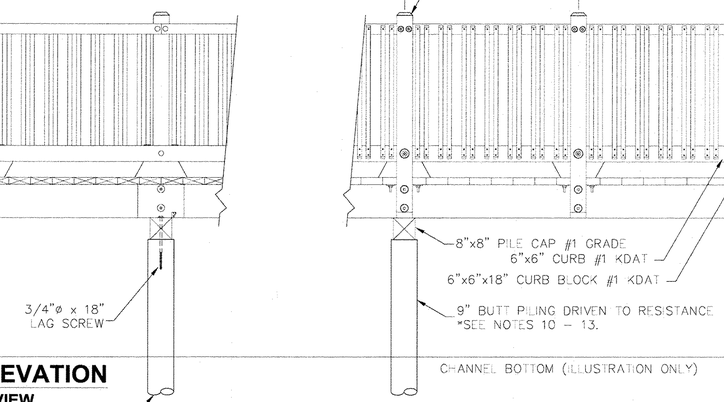
PLAN VIEW & PROFILE

SHEET NO.
A
1
61067

116 OF 82

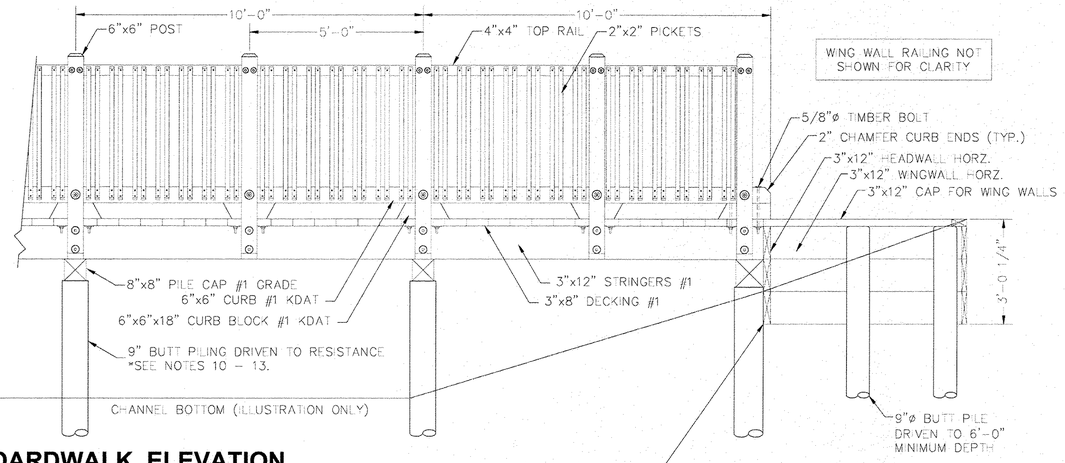


WING WALL RAILING
ELEVATION



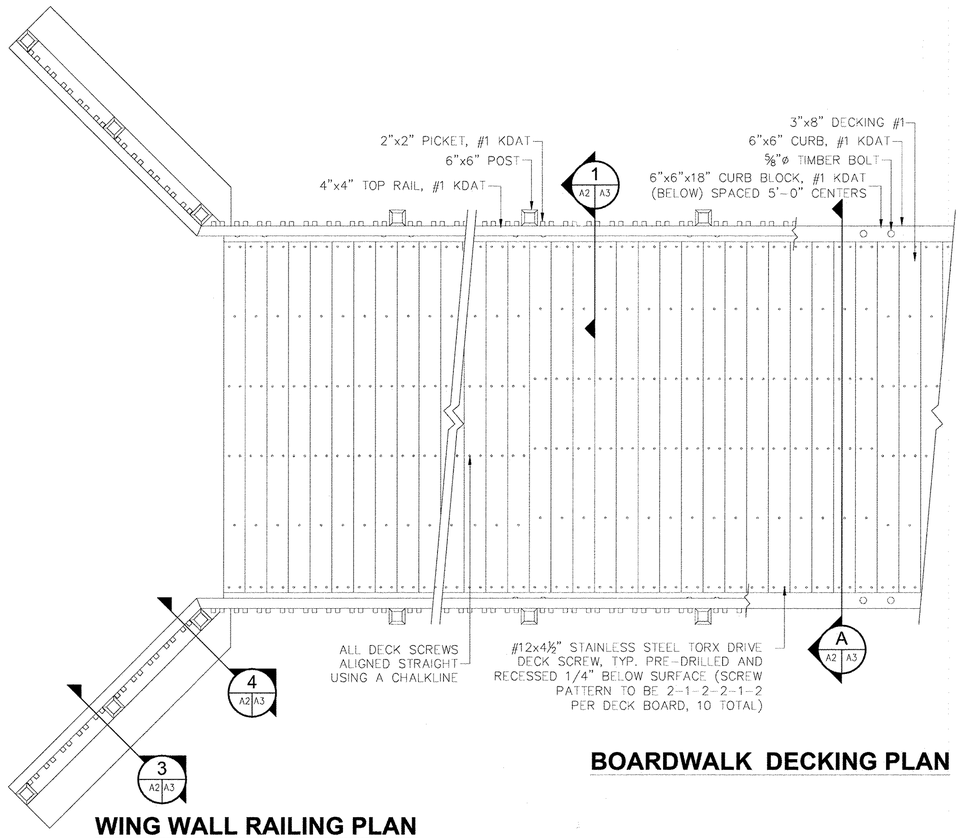
RAILING ELEVATION
INSIDE VIEW

UPON ENCOUNTERING DENSE SOIL OR OTHER SIMILAR SOIL CONDITIONS THAT PREVENT DRIVING PILING, THE AUGERING METHOD MAY BE UTILIZED TO ASSIST PILE DRIVING EQUIPMENT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE USE OF THE AUGERING METHOD TO DRIVE PILES. CONTRACTOR MAY VISIT SITE PRIOR TO BIDDING TO ASSIST IN DETERMINING WHETHER THE AUGERING METHOD MAY BE REQUIRED.



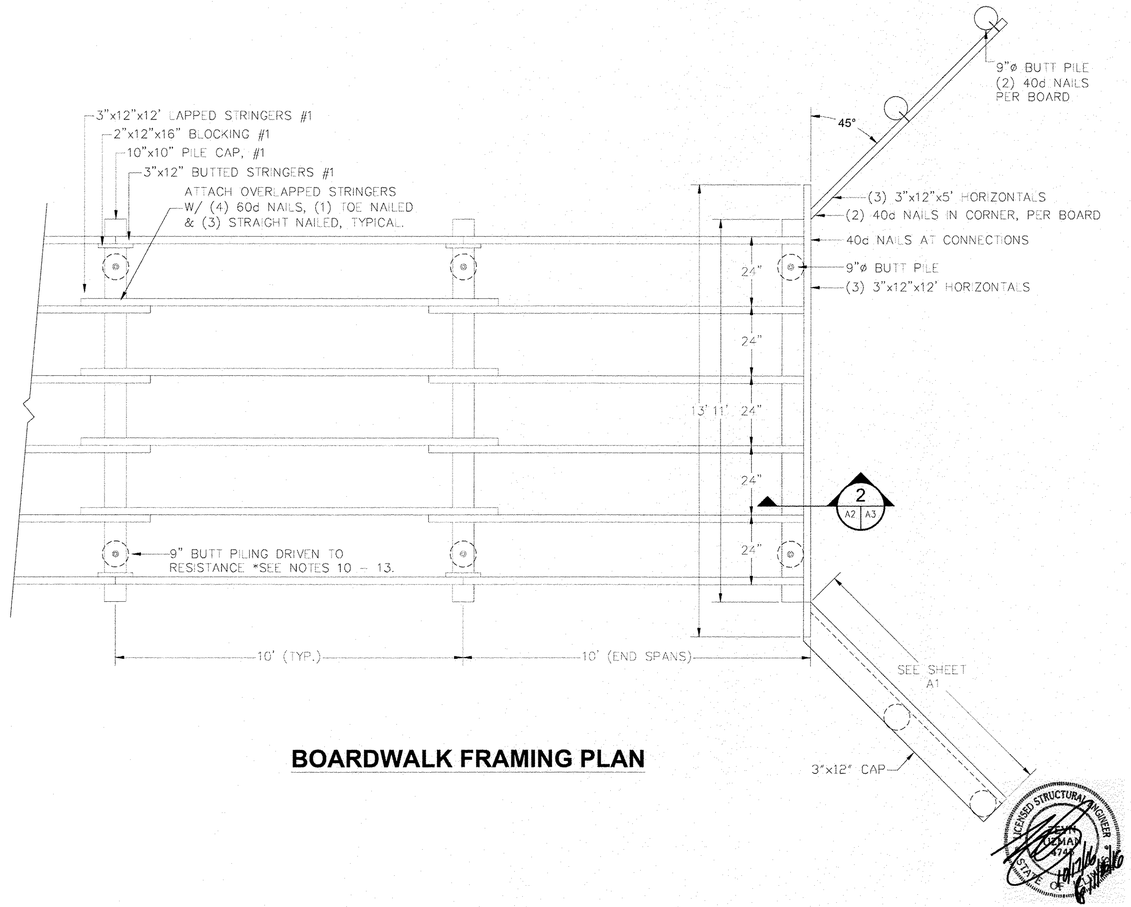
BOARDWALK ELEVATION
UPGRADED PICKET STYLE HAND RAILING WITH CURB

HEADWALL IS TO BE BURIED A MINIMUM OF 12-INCHES BELOW EXISTING GRADE. WINGWALLS TO HAVE SAME BURY DEPTH WITH OUTSIDE FINISHED GRADE SLOPING UP TO TOP OF WINGWALL PILE CAP AT END OF WINGWALL. SEE ABUTMENT BOARDS ON SHEET A1



BOARDWALK DECKING PLAN

WING WALL RAILING PLAN



BOARDWALK FRAMING PLAN

LICENSED STRUCTURAL ENGINEER
STEVEN A. HAAS
4754
STATE OF ILLINOIS

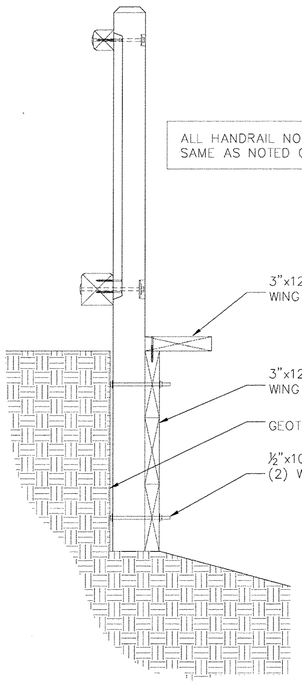
LYONS WOODS TRAIL
5 TON BOARDWALKS
AT
LAKE COUNTY
ILLINOIS

scale:	as shown
drawn:	C. THOMAS
checked:	D. HUGHES
approved:	D. HUGHES
date:	9-29-16
job no.:	92516

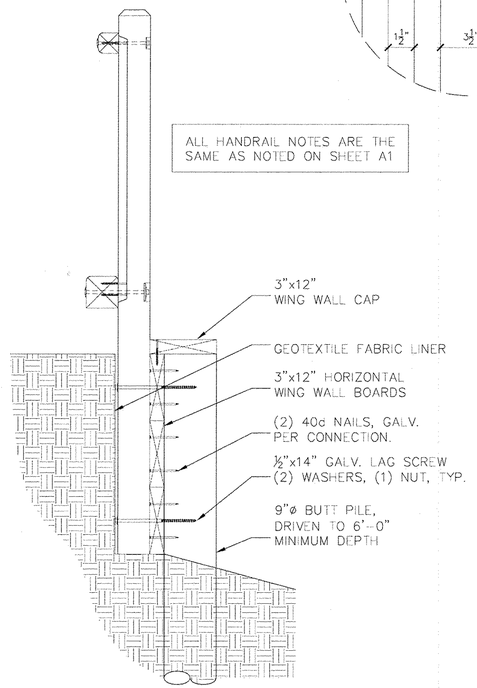
BRIDGE PLAN & ELEVATION

SHEET NO.
A
2
61067

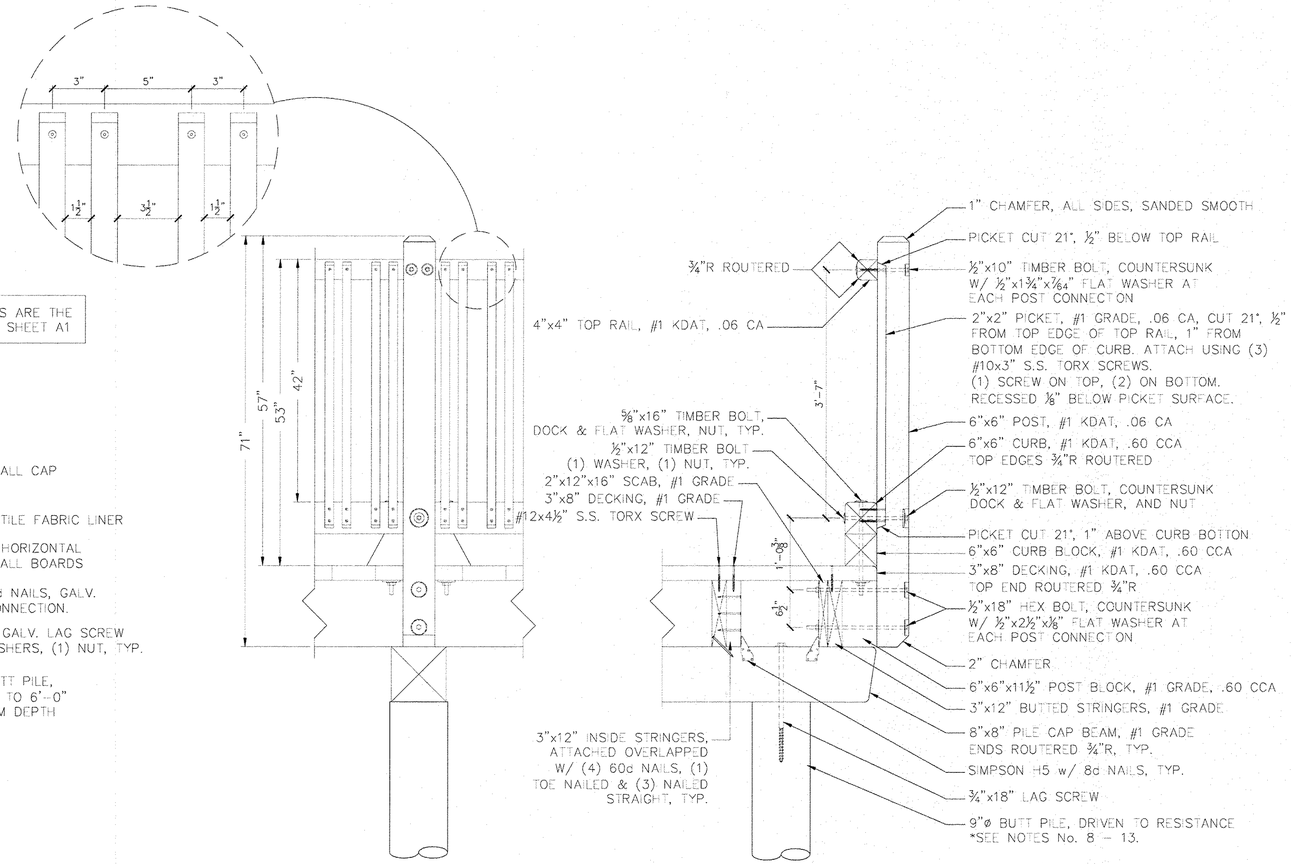
116 OF 83



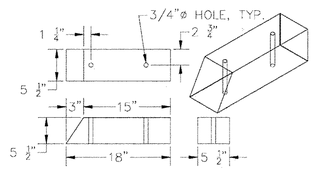
WING WALL RAILING DETAIL (4 | A2 | A3)
POST SECURED TO WING WALL BOARDS



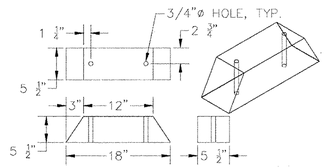
WING WALL RAILING DETAIL (3 | A2 | A3)
POST SECURED TO PILE



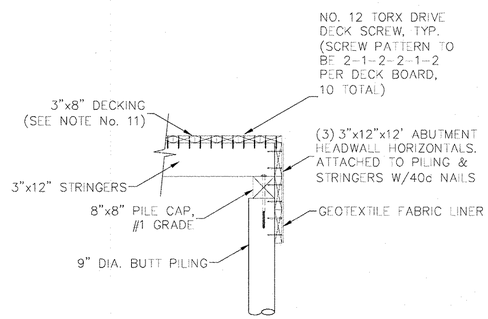
42" HIGH RAILING DETAIL (1 | A2 | A3)
UPGRADED PICKET STYLE HAND RAILING WITH CURB



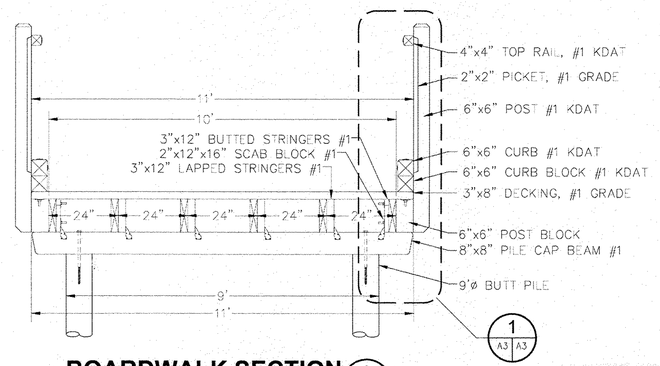
6"x6"x18" END BLOCK DETAIL



6"x6"x18" CURB BLOCK DETAIL



SECTION (2 | A2 | A3)
1/2" = 1'-0"



BOARDWALK SECTION (A | A2 | A3)
PILE SUPPORTED
1/2" = 1'-0"

LICENSED STRUCTURAL ENGINEER · STATE OF ILLINOIS · 062507

LYONS WOODS TRAIL
5 TON BOARDWALKS
AT
LAKE COUNTY
ILLINOIS

scale:	as shown
drawn:	C. THOMAS
checked:	D. HUGHES
approved:	D. HUGHES
date:	9-29-16
job no.:	92516

SECTIONS DETAILS & NOTES

SHEET NO.
A
3

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	85
STA. 0+50.00		TO STA. 3+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

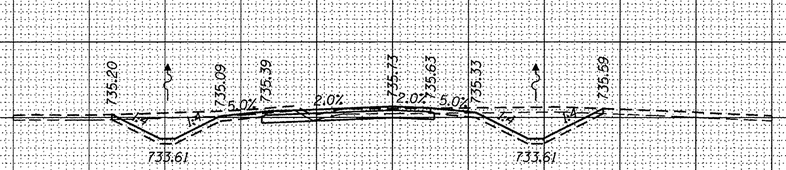
ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TOPSOIL — AREAS — AREAS CHECKED — BY — DATE

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

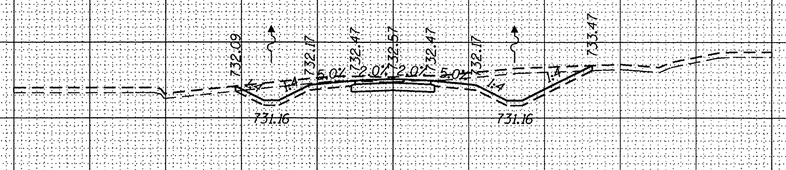
PLOT DATE = 11/14/2016
FILE NAME = 4985-zzzz3-xsht
PLOT SCALE = 1:10
USER NAME = MColeman

2+00.00 — CUT = 46.13 — FILL = 0.01 — TOPSOIL EX = 21.67 — TOPSOIL PLACE = 14.29



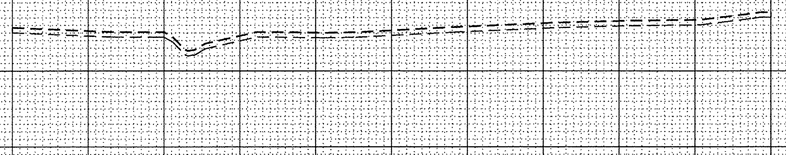
2+00.00

3+50.00 — CUT = 40.35 — FILL = 0.07 — TOPSOIL EX = 15.76 — TOPSOIL PLACE = 12.28



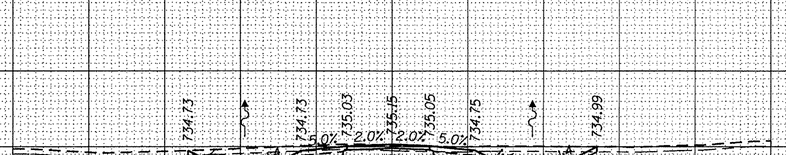
3+50.00

1+00.00 — CUT = 12.22 — FILL = 0.07 — TOPSOIL EX = 9.25 — TOPSOIL PLACE = 5.79



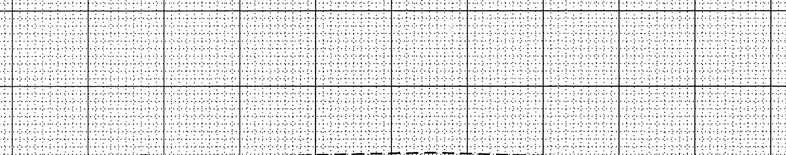
1+00.00

3+00.00 — CUT = 49.57 — FILL = 0.07 — TOPSOIL EX = 18.15 — TOPSOIL PLACE = 14.69



3+00.00

0+50.00 — CUT = 0.00 — FILL = 0.00 — TOPSOIL EX = 0.00 — TOPSOIL PLACE = 0.00



0+50.00

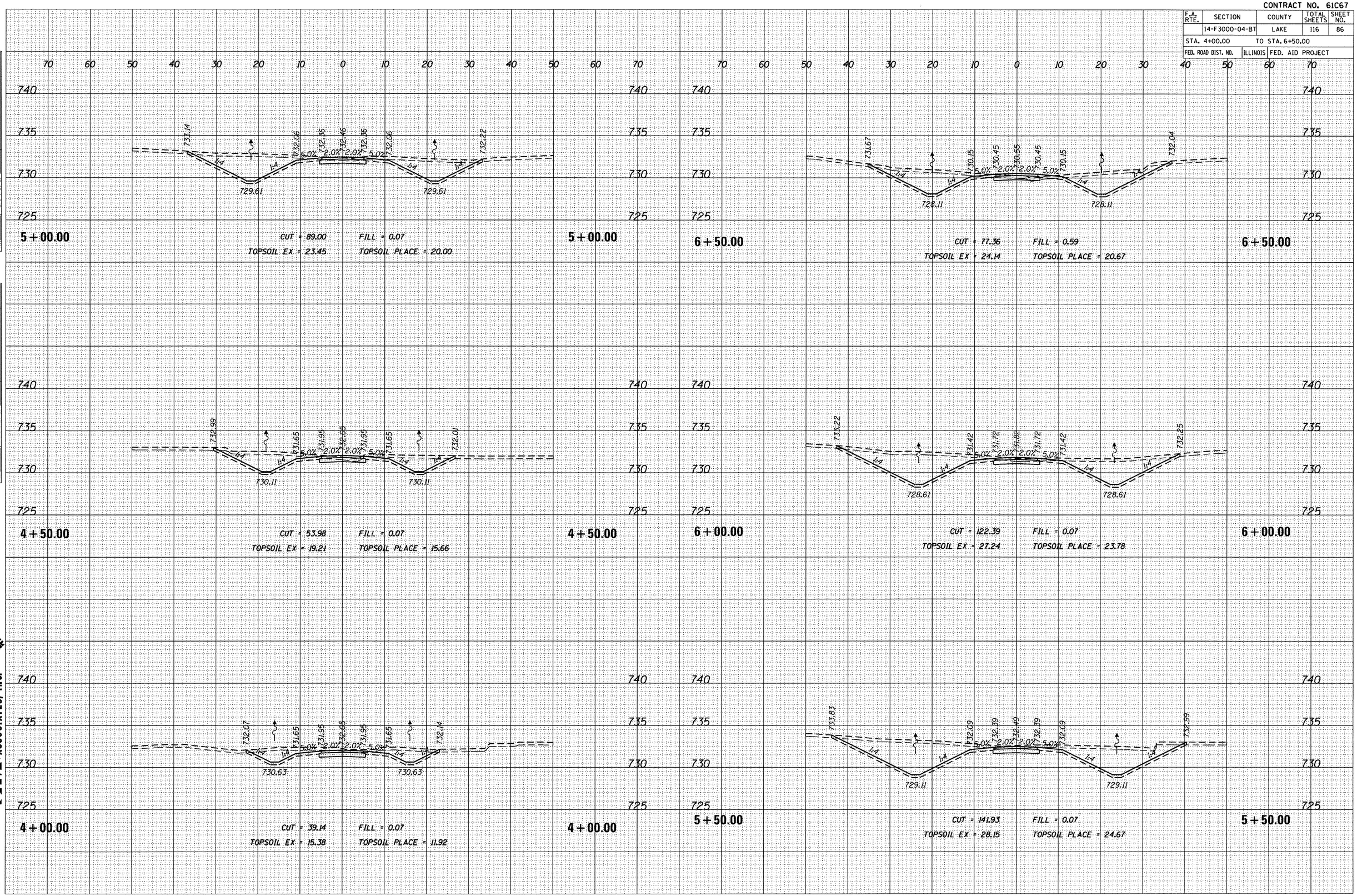
2+50.00 — CUT = 40.93 — FILL = 0.07 — TOPSOIL EX = 18.06 — TOPSOIL PLACE = 14.28

2+50.00

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	86
STA. 4+00.00		TO STA. 6+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzzz3.xssh
PLOT SCALE = 1:10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	87

STA. 7+00.00 TO STA.10+00.00

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

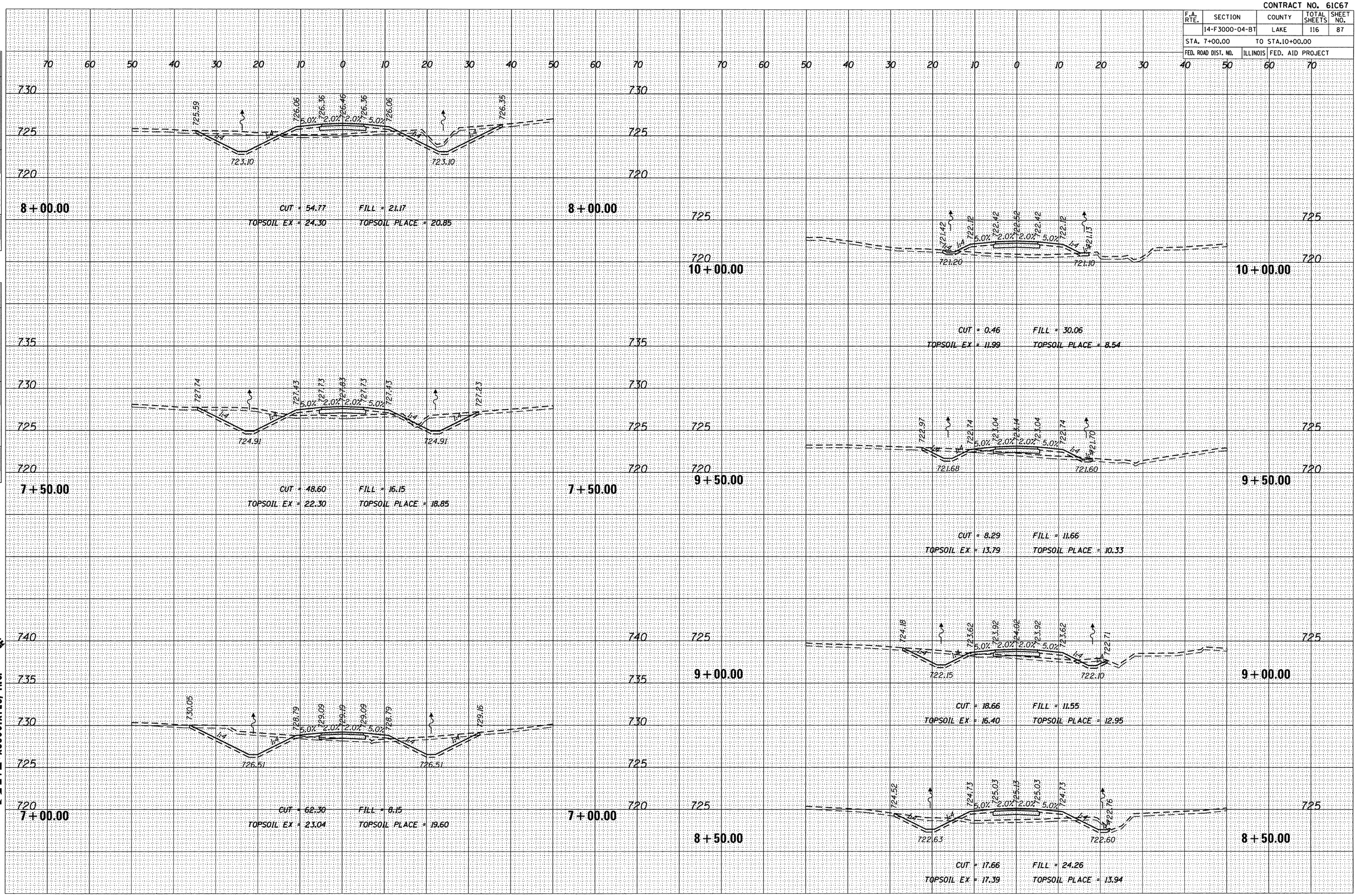
ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzzz3.xssht
PLOT SCALE = 1:10
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	88
STA. 10+50.00		TO STA. 13+03.44		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzz23.ssshl
PLOT SCALE = 1:10
USER NAME = MColeman

12 + 00.00

CUT = 0.00 FILL = 117.95
TOPSOIL EX = 17.24 TOPSOIL PLACE = 13.78

11 + 50.00

CUT = 0.00 FILL = 101.23
TOPSOIL EX = 19.59 TOPSOIL PLACE = 16.14

11 + 00.00

CUT = 0.00 FILL = 80.37
TOPSOIL EX = 20.07 TOPSOIL PLACE = 16.61

10 + 50.00

CUT = 0.00 FILL = 55.74
TOPSOIL EX = 20.37 TOPSOIL PLACE = 16.99

13 + 03.44

CUT = 10.27 FILL = 131.48
TOPSOIL EX = 21.11 TOPSOIL PLACE = 17.65

13 + 00.00

CUT = 5.90 FILL = 126.87
TOPSOIL EX = 21.00 TOPSOIL PLACE = 17.54

12 + 50.00

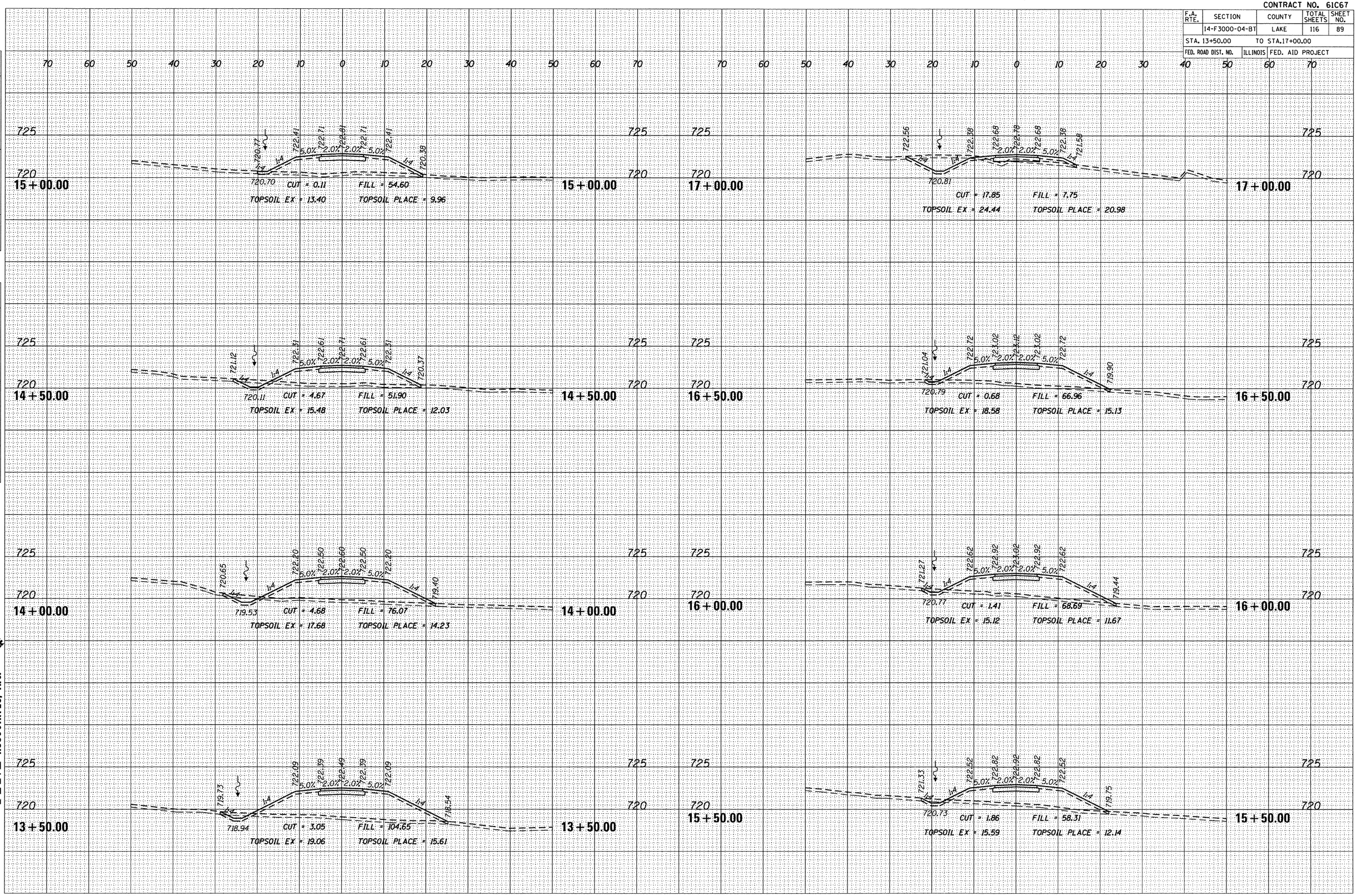
CUT = 0.52 FILL = 121.41
TOPSOIL EX = 18.42 TOPSOIL PLACE = 14.97

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	89
STA. 13+50.00		TO STA. 17+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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

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



LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3.ssh
PLOT SCALE = 1:10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	90
STA. 17+50.00		TO STA. 21+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

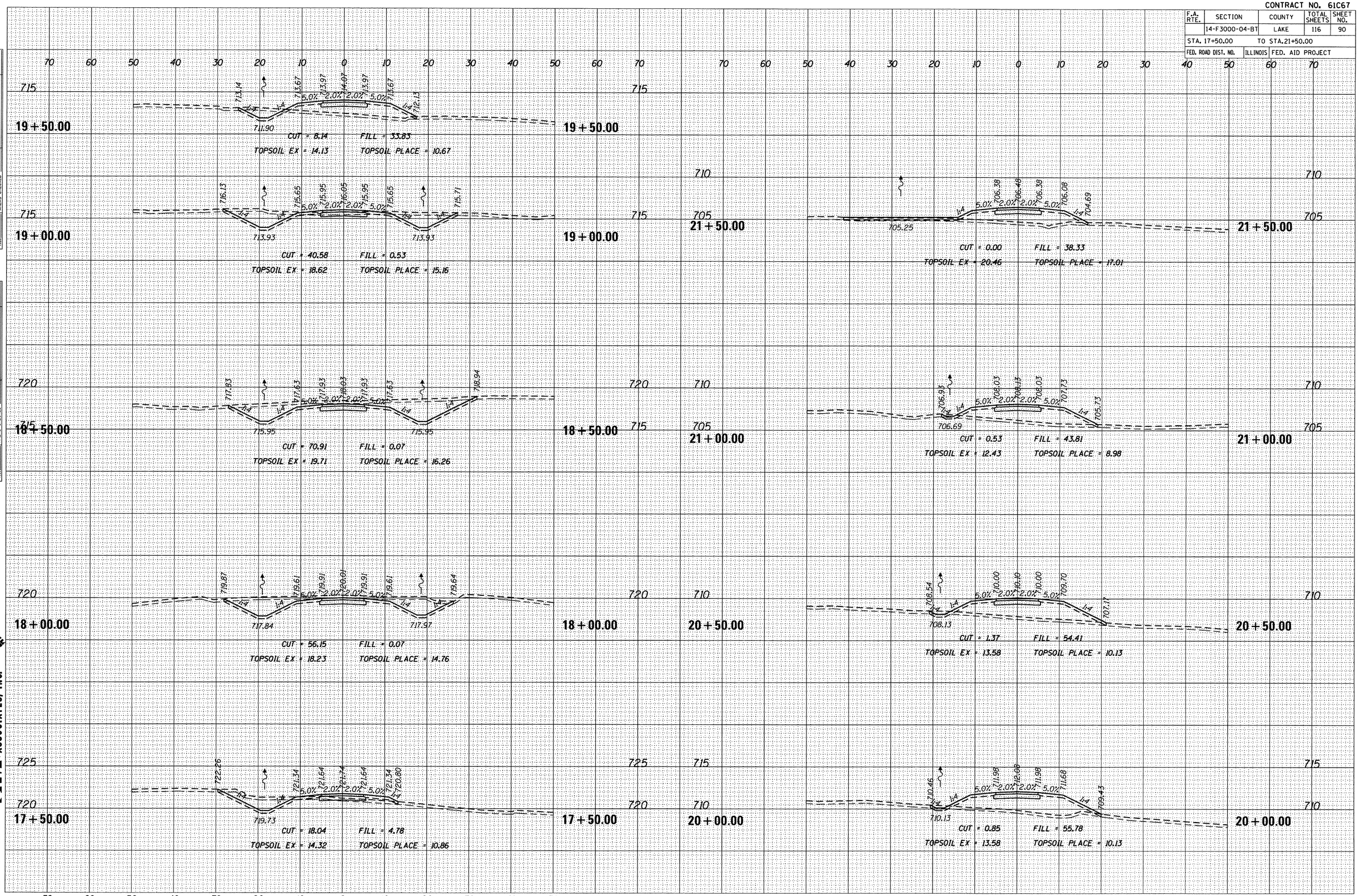
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzzz3.xsht
PLOT SCALE = 1:10
USER NAME = HColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	91
STA. 22+00.00		TO STA. 25+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3.xsh
PLOT SCALE = 1:10
USER NAME = MColeman

23+30.40

SKEW ANGLE = 24.37 LT

703.30 — 3.6% — 703.55 — 1.3% — 703.62 — 2.4% — 703.49 — 5.0% — 703.17 — 699.84

1:4.5 — 701.00 — 1:4

CUT = 4.64 FILL = 88.62

TOPSOIL EX = 0.00 TOPSOIL PLACE = 31.27

23+00.00

703.77 — 5.0% — 704.07 — 2.0% — 704.17 — 2.0% — 704.07 — 5.0% — 703.77 — 701.73

1:4 — 700.98 — 1:4 — 700.60

CUT = 8.24 FILL = 84.57

TOPSOIL EX = 18.20 TOPSOIL PLACE = 14.76

22+50.00

704.26 — 5.0% — 704.56 — 2.0% — 704.66 — 2.0% — 704.56 — 5.0% — 704.26

1:4 — 702.16 — 1:4 — 702.65

CUT = 0.00 FILL = 49.99

TOPSOIL EX = 12.35 TOPSOIL PLACE = 8.90

22+00.00

703.79 — 1:4 — 704.93 — 5.0% — 705.23 — 2.0% — 705.33 — 2.0% — 705.23 — 5.0% — 704.93 — 1:4 — 704.00

CUT = 0.00 FILL = 32.53

TOPSOIL EX = 10.13 TOPSOIL PLACE = 6.68

23+30.40

25+00.00

706.69 — 1:4 — 703.95 — 5.0% — 704.25 — 2.0% — 704.35 — 2.0% — 704.25 — 5.0% — 703.95 — 1:4 — 704.39

1:4 — 702.41 — 1:4 — 702.41

CUT = 129.11 FILL = 0.07

TOPSOIL EX = 21.18 TOPSOIL PLACE = 17.71

23+00.00

24+50.00

703.84 — 1:4 — 703.68 — 5.0% — 703.98 — 2.0% — 704.08 — 2.0% — 703.98 — 5.0% — 703.68

1:4 — 702.25 — 1:4

CUT = 14.33 FILL = 2.52

TOPSOIL EX = 11.04 TOPSOIL PLACE = 7.60

22+00.00

24+00.00

703.00 — 1:4 — 703.26 — 5.0% — 703.56 — 2.0% — 703.66 — 2.0% — 703.56 — 5.0% — 703.26

1:4 — 702.10 — 1:4

CUT = 7.12 FILL = 2.52

TOPSOIL EX = 11.04 TOPSOIL PLACE = 7.60

22+50.00

23+50.00

701.94 — 1:4 — 703.31 — 5.0% — 703.61 — 2.0% — 703.71 — 2.0% — 703.61 — 5.0% — 703.31 — 1:4 — 699.49

CUT = 0.00 FILL = 68.37

TOPSOIL EX = 14.53 TOPSOIL PLACE = 11.07

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	92
STA. 25+50.00		TO STA. 28+14.97		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3-xssht.dgn
PLOT SCALE = 1:10
USER NAME = MColeman

27+00.00
701.89 — 697.05 — 698.60 — 698.90 — 699.00 — 698.90 — 698.60 — 698.18
5.0% 2.0% 2.0% 5.0%
CUT = 49.19 FILL = 2.40
TOPSOIL EX = 17.14 TOPSOIL PLACE = 13.69

27+00.00

28+14.97
691.71 — 695.89 — 697.39 — 697.69 — 697.79 — 697.69 — 697.39 — 695.72 — 695.58
5.0% 2.0% 2.0% 5.0%
CUT = 61.78 FILL = 13.89
TOPSOIL EX = 39.69 TOPSOIL PLACE = 42.77

28+14.97

26+50.00
703.01 — 698.08 — 699.61 — 699.91 — 700.01 — 699.91 — 699.61 — 698.56
5.0% 2.0% 2.0% 5.0%
CUT = 52.24 FILL = 6.39
TOPSOIL EX = 18.10 TOPSOIL PLACE = 14.64

26+50.00

28+00.00

28+00.00

26+00.00
702.70 — 699.00 — 701.14 — 701.44 — 701.54 — 701.44 — 701.14 — 701.07
5.0% 2.0% 2.0% 5.0%
CUT = 41.85 FILL = 0.79
TOPSOIL EX = 21.32 TOPSOIL PLACE = 17.99

26+00.00

27+75.95
697.55 — 696.28 — 697.65 — 697.95 — 698.05 — 697.95 — 697.65 — 696.03 — 695.82
5.0% 2.0% 2.0% 5.0%

27+75.95

25+50.00
704.56 — 700.49 — 703.02 — 703.32 — 703.42 — 703.32 — 703.02 — 701.49 — 702.98
5.0% 2.0% 2.0% 5.0%
CUT = 100.32 FILL = 0.07
TOPSOIL EX = 21.18 TOPSOIL PLACE = 17.71

25+50.00

27+50.00
688.64 — EX ROW — 696.42 — 691.95 — 698.26 — 698.35 — 698.26 — 697.95 — 696.44
5.0% 2.0% 2.0% 5.0%
CUT = 18.31 FILL = 15.90
TOPSOIL EX = 15.09 TOPSOIL PLACE = 11.63

27+50.00

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	93
STA. 28+50.00		TO STA. 30+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

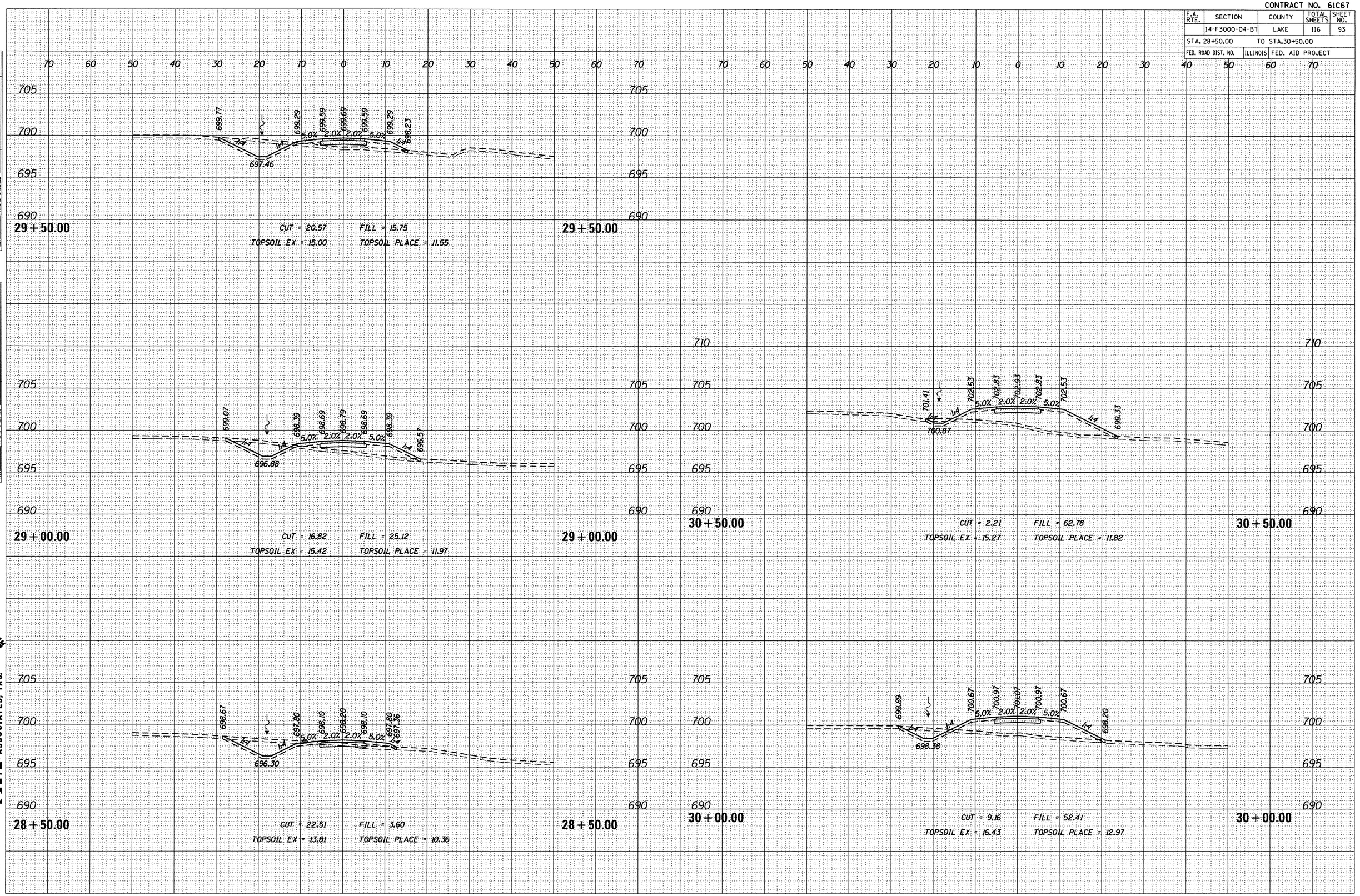
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz3..xssht
PLOT SCALE = 1:10
USER NAME = HColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	94
STA. 31+00.00		TO STA.33+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzzz3.xsshf
PLOT SCALE = 1:10
USER NAME = MColeman

32 + 00.00
CUT = 17.39 FILL = 0.67
TOPSOIL EX = 11.89 TOPSOIL PLACE = 8.44

31 + 50.00
CUT = 4.73 FILL = 10.95
TOPSOIL EX = 11.95 TOPSOIL PLACE = 8.50

31 + 00.00
CUT = 11.06 FILL = 28.69
TOPSOIL EX = 15.01 TOPSOIL PLACE = 11.55

33 + 00.00
CUT = 5.30 FILL = 20.13
TOPSOIL EX = 13.14 TOPSOIL PLACE = 9.68

32 + 50.00
CUT = 8.53 FILL = 8.79
TOPSOIL EX = 12.35 TOPSOIL PLACE = 8.90

EX ROW

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	95
STA. 33+50.00	TO STA.36+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3-xssh
PLOT SCALE = 1:10
USER NAME = MColeman

34 + 50.00
CUT = 14.77 FILL = 7.52
TOPSOIL EX = 15.41 TOPSOIL PLACE = 11.97

34 + 00.00
CUT = 7.89 FILL = 25.62
TOPSOIL EX = 14.69 TOPSOIL PLACE = 11.25

33 + 50.00
CUT = 7.44 FILL = 18.40
TOPSOIL EX = 13.72 TOPSOIL PLACE = 10.27

36 + 00.00
CUT = 47.57 FILL = 0.07
TOPSOIL EX = 17.16 TOPSOIL PLACE = 13.69

35 + 50.00
CUT = 75.38 FILL = 0.07
TOPSOIL EX = 20.28 TOPSOIL PLACE = 16.83

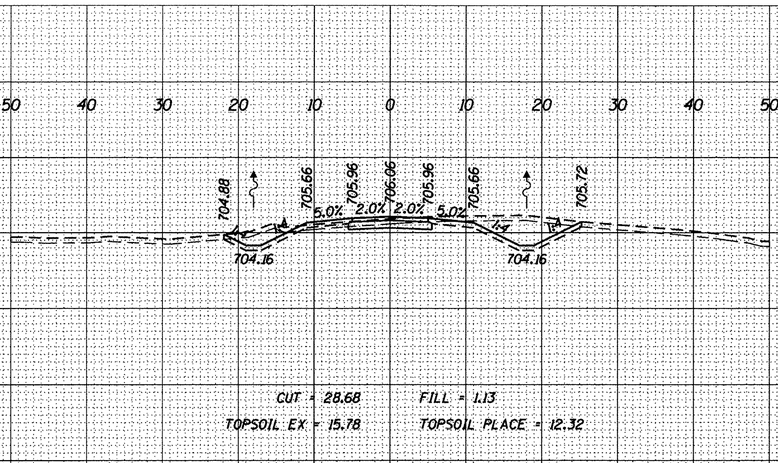
35 + 00.00
CUT = 78.35 FILL = 0.07
TOPSOIL EX = 17.58 TOPSOIL PLACE = 14.12

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	96
STA. 36+50.00		TO STA. 39+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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

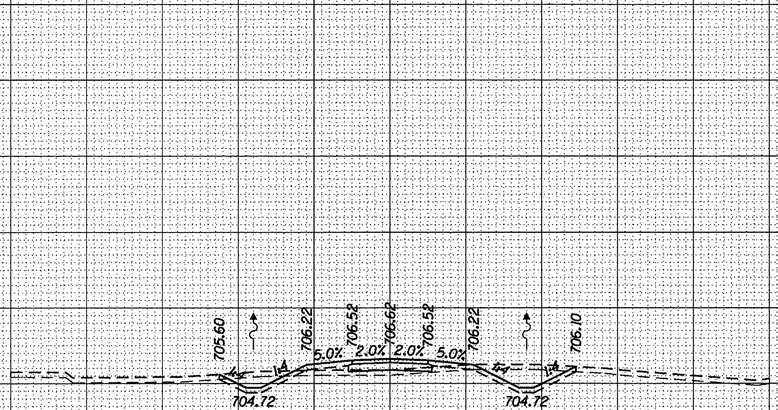
	DATE	BY
ORIGINAL SURVEY		
NOTE BOOK		
NO.		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



37 + 50.00

CUT = 28.68 FILL = 1.13

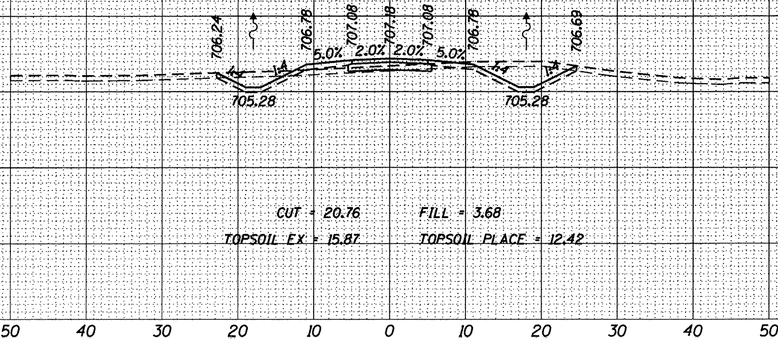
TOPSOIL EX = 15.78 TOPSOIL PLACE = 12.32



37 + 00.00

CUT = 18.07 FILL = 6.88

TOPSOIL EX = 15.74 TOPSOIL PLACE = 12.28



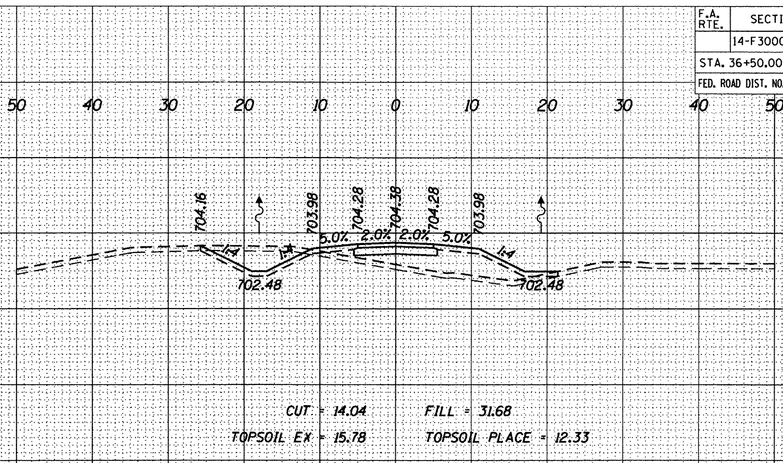
36 + 50.00

CUT = 20.76 FILL = 3.68

TOPSOIL EX = 15.87 TOPSOIL PLACE = 12.42

37 + 50.00

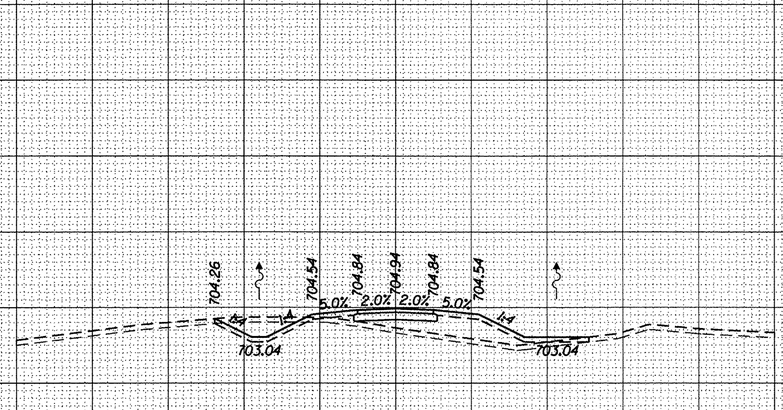
39 + 00.00



CUT = 14.04 FILL = 31.68

TOPSOIL EX = 15.78 TOPSOIL PLACE = 12.33

39 + 00.00

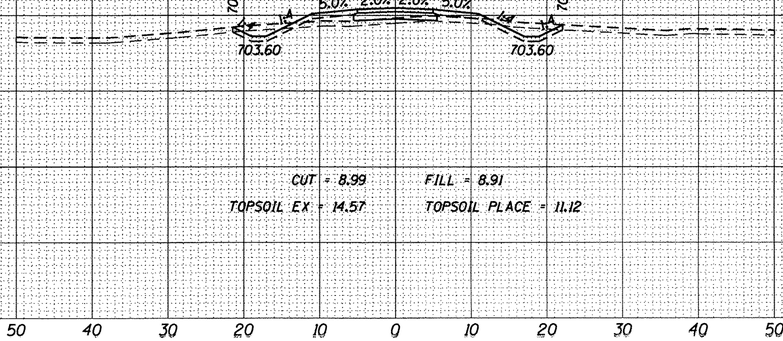


38 + 50.00

CUT = 9.43 FILL = 29.28

TOPSOIL EX = 16.53 TOPSOIL PLACE = 13.07

38 + 00.00



CUT = 8.99 FILL = 8.91

TOPSOIL EX = 14.57 TOPSOIL PLACE = 11.12

LAKE COUNTY FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

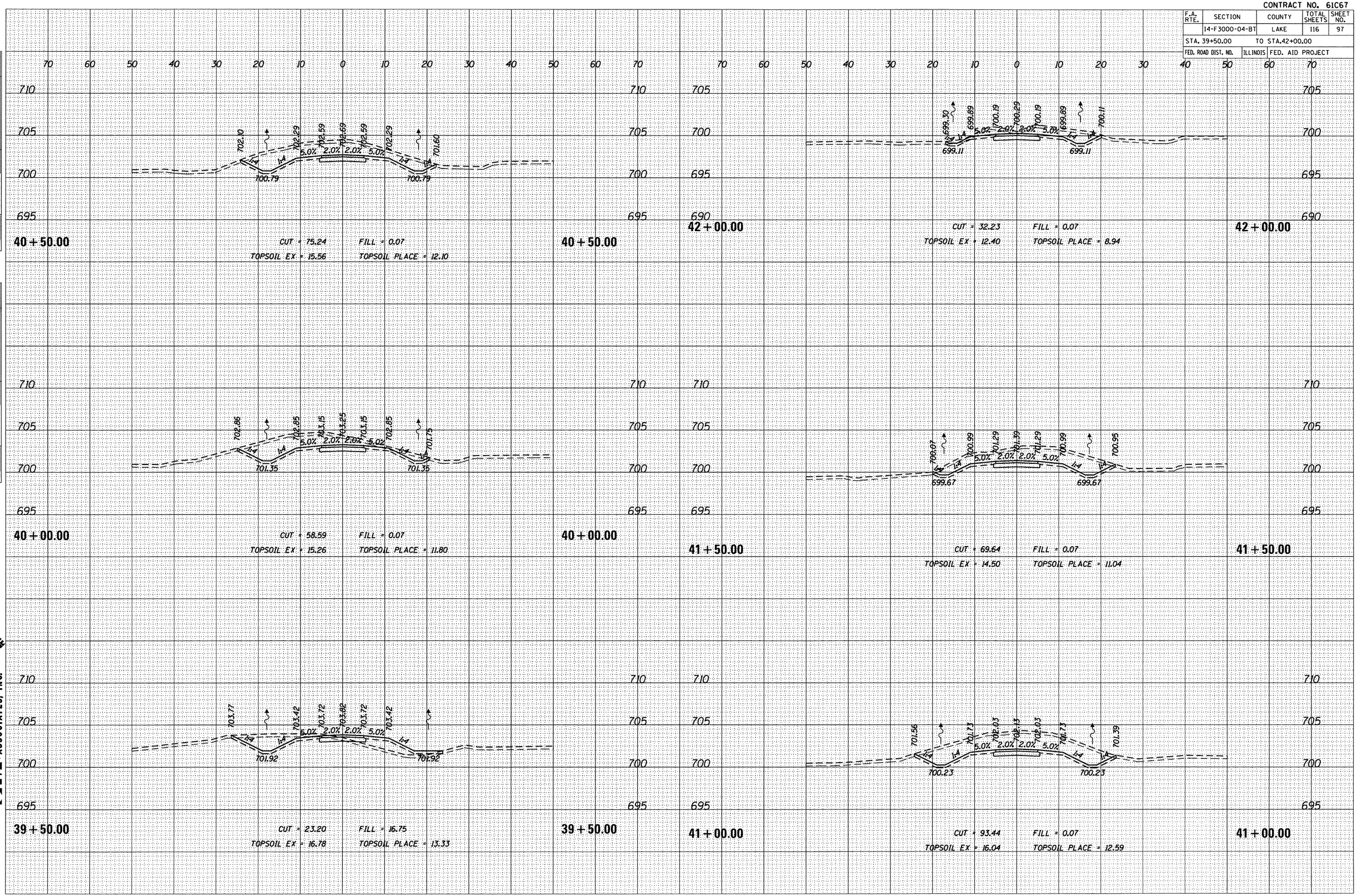
PLOT DATE = 11/14/2016
FILE NAME = 4985-zzz3..ssp
PLOT SCALE = 1:10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	97
STA. 39+50.00	TO STA. 42+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz23.nssh
PLOT SCALE = 1:10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	98
STA. 42+50.00		TO STA. 45+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

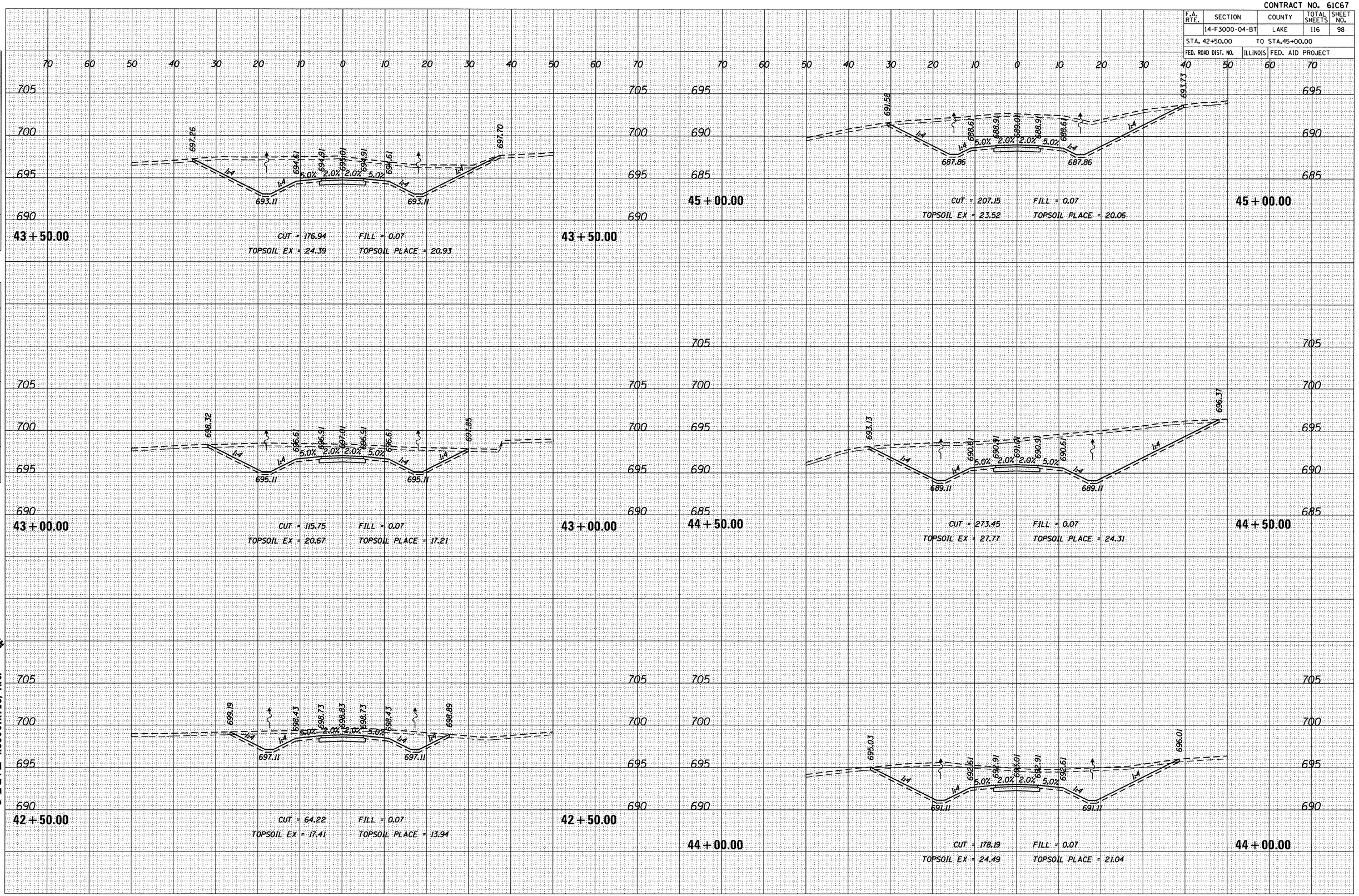
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzz3..xsm
PLOT SCALE = 1:10
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	99
STA. 45+35.07	TO STA. 47+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

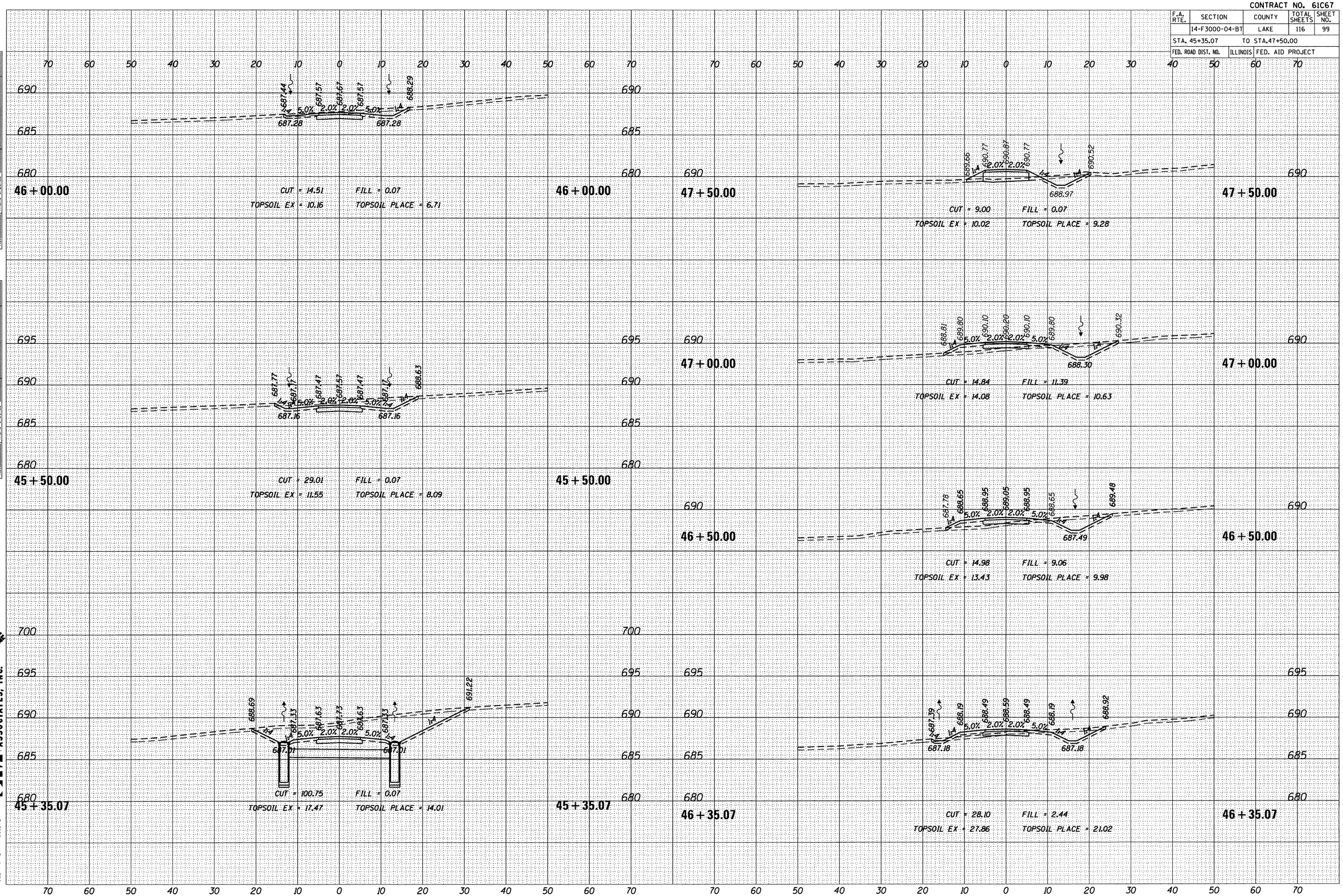
FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — PLOTTED AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz3..xsm
PLOT SCALE = 1:10
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	100
STA. 48+00.00	TO STA.52+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

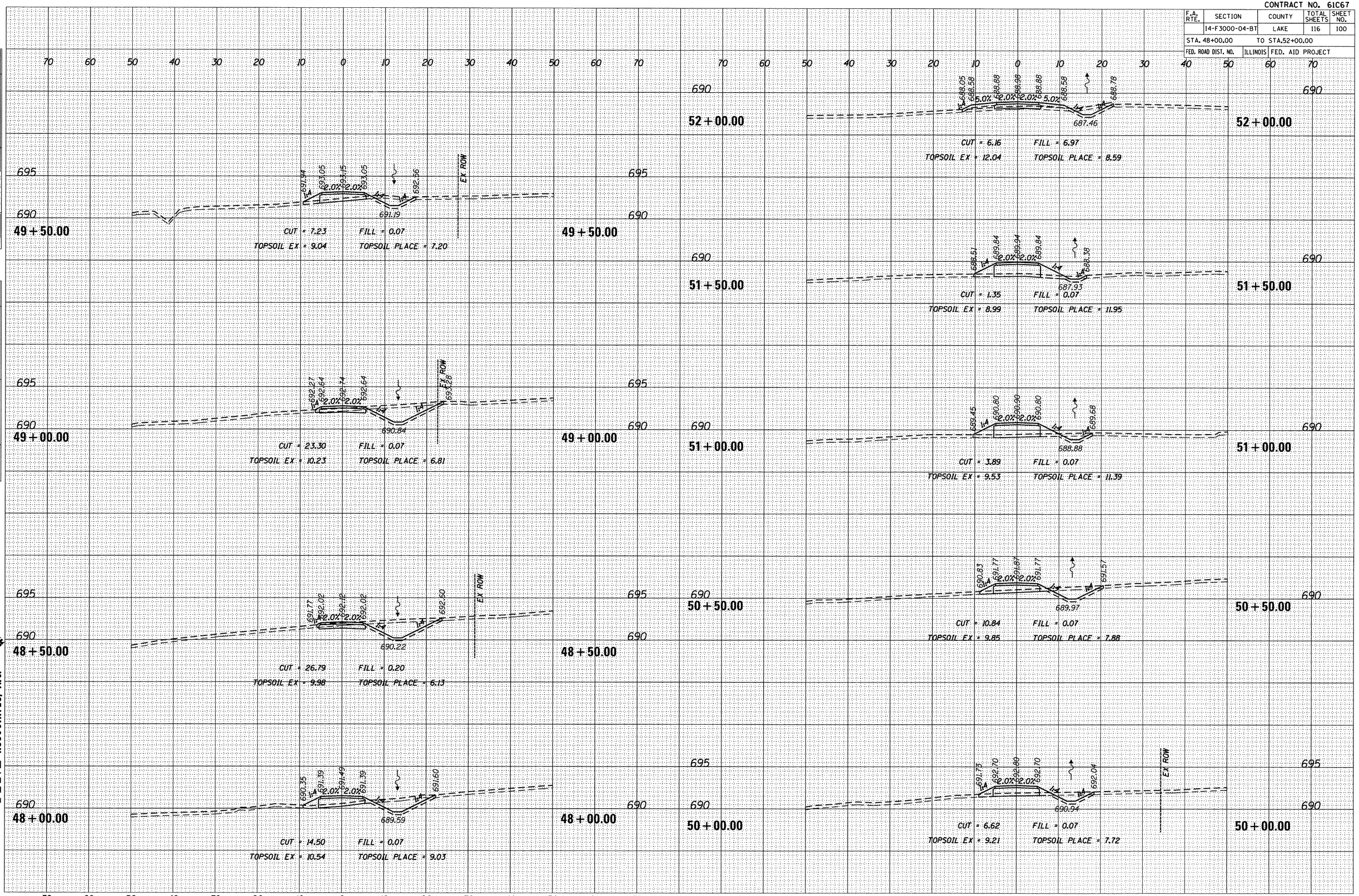
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzz23..ssmh
PLOT SCALE = 1i0
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	101
STA. 52+50.00		TO STA. 55+62.88		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

54 + 50.00 — 685

BFE; 685.22, 686.11, 686.47, 686.57, 686.47, 686.17, 685.11; 5.0%, 2.0%, 2.0%, 5.0%; 1:4; 683.76

CUT = 10.79 FILL = 23.35

TOPSOIL EX = 14.34 TOPSOIL PLACE = 10.88

54 + 00.00 — 685

BFE; 685.38, 686.22, 686.52, 686.66, 686.52, 686.22, 685.33; 5.0%, 2.0%, 2.0%, 5.0%; 1:4; 684.26

CUT = 7.59 FILL = 22.41

TOPSOIL EX = 13.23 TOPSOIL PLACE = 9.77

53 + 50.00 — 685

BFE; 685.41, 686.30, 686.60, 686.70, 686.60, 686.30, 685.97; 5.0%, 2.0%, 2.0%, 5.0%; 1:4; 684.75

CUT = 8.36 FILL = 13.34

TOPSOIL EX = 12.94 TOPSOIL PLACE = 9.48

53 + 00.00 — 690

BFE; 686.75, 687.05, 687.15, 687.05, 686.75, 687.00; 5.0%, 2.0%, 2.0%, 5.0%; 685.16

CUT = 15.78 FILL = 3.96

TOPSOIL EX = 13.06 TOPSOIL PLACE = 9.61

52 + 50.00 — 690

BFE; 686.87, 687.62, 687.92, 688.02, 687.92, 687.62, 688.67; 5.0%, 2.0%, 2.0%, 5.0%; 1:4; 686.77

CUT = 11.71 FILL = 7.55

TOPSOIL EX = 12.74 TOPSOIL PLACE = 9.28

55 + 62.88 — 685

BFE; 686.50

55 + 50.00 — 685

BFE; 686.50

55 + 39.88 — 680

BFE; 686.50

55 + 16.88 — 685

BFE; 686.50

55 + 00.00 — 685

BFE; 684.74; 686.12, 686.42, 686.52, 686.42, 686.12, 683.65; 5.0%, 2.0%, 2.0%, 5.0%; 1:4; 683.26, 683.26

CUT = 13.14 FILL = 60.01

TOPSOIL EX = 18.82 TOPSOIL PLACE = 15.37

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

	DATE	BY
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
CHECKED		

FINAL SURVEY NOTE BOOK NO.

ORIGINAL SURVEY NOTE BOOK NO.

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3.xsh
PLOT SCALE = 1a10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	102
STA. 56+00.00	TO STA. 58+85.07			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

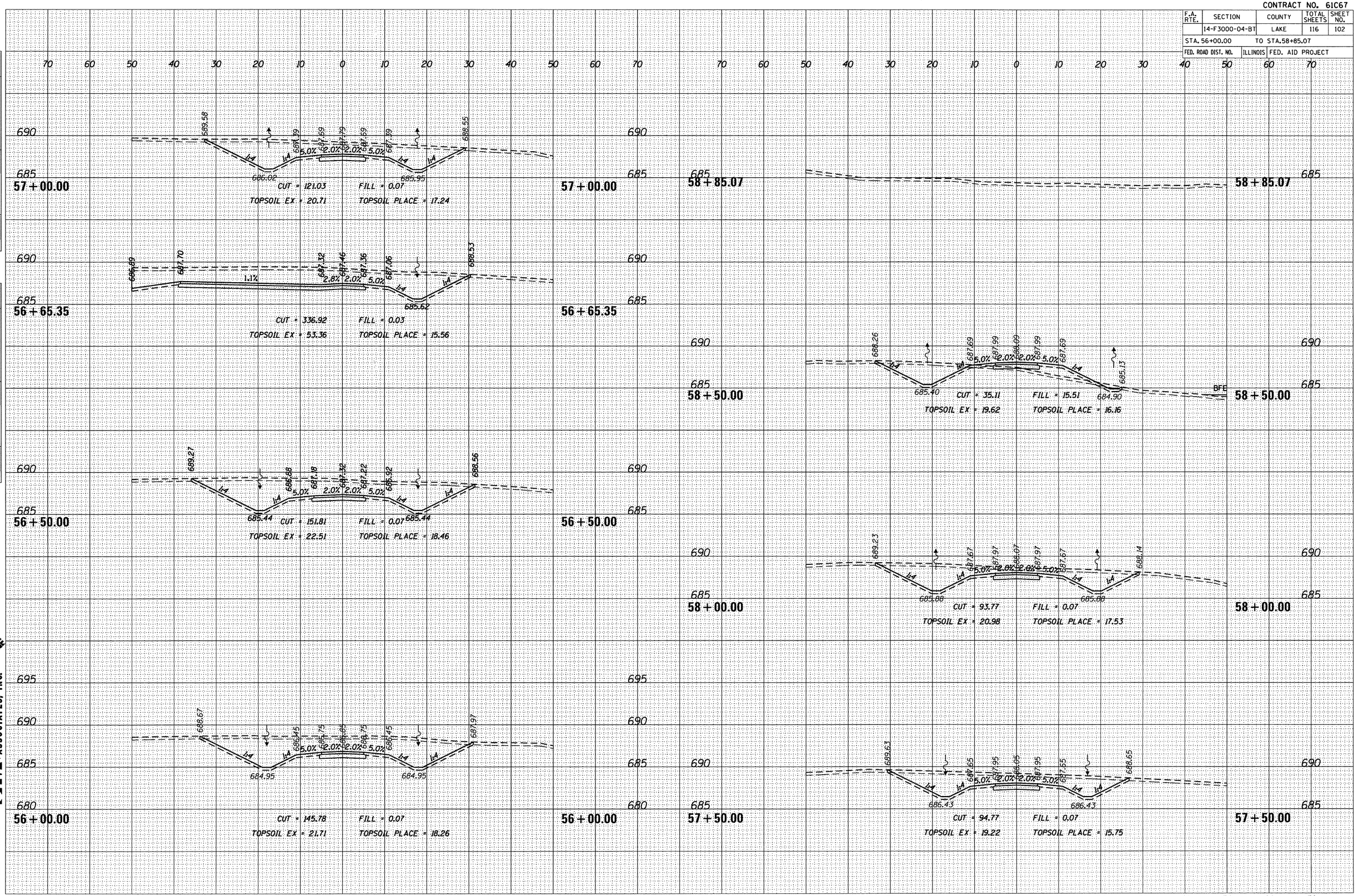
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz3..xssm
PLOT SCALE = 1:10
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	103
STA. 59+00.00		TO STA. 63+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

60+50.00
CUT = 0.00 FILL = 60.54
TOPSOIL EX = 13.43 TOPSOIL PLACE = 9.97

60+00.00
CUT = 0.06 FILL = 52.76
TOPSOIL EX = 12.78 TOPSOIL PLACE = 9.33

59+50.00
CUT = 0.00 FILL = 78.28
TOPSOIL EX = 13.60 TOPSOIL PLACE = 10.15

59+00.00
CUT = 0.00 FILL = 108.36
TOPSOIL EX = 15.56 TOPSOIL PLACE = 12.11

63+00.00
CUT = 12.53 FILL = 21.56
TOPSOIL EX = 14.15 TOPSOIL PLACE = 10.62

62+50.00
CUT = 25.78 FILL = 3.68
TOPSOIL EX = 14.04 TOPSOIL PLACE = 10.43

62+00.00
CUT = 6.01 FILL = 11.09
TOPSOIL EX = 11.77 TOPSOIL PLACE = 8.26

61+50.00
CUT = 3.44 FILL = 23.50
TOPSOIL EX = 12.07 TOPSOIL PLACE = 8.51

61+00.00
CUT = 0.06 FILL = 50.38
TOPSOIL EX = 12.86 TOPSOIL PLACE = 9.35

EX ROW

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

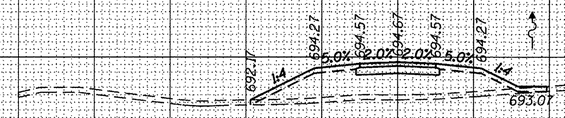
PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3..xsh
PLOT SCALE = 1:10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	104
STA. 63+50.00	TO STA. 68+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

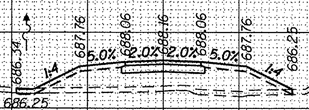
65 + 50.00



CUT = 0.00 FILL = 51.89
TOPSOIL EX = 13.02 TOPSOIL PLACE = 9.49

65 + 50.00

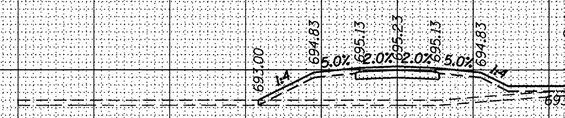
68 + 00.00



CUT = 0.12 FILL = 40.82
TOPSOIL EX = 12.14 TOPSOIL PLACE = 8.62

68 + 00.00

65 + 00.00



CUT = 0.00 FILL = 55.82
TOPSOIL EX = 16.20 TOPSOIL PLACE = 12.59

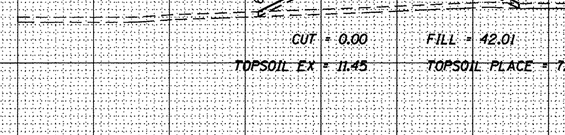
65 + 00.00

67 + 50.00

CUT = 4.48 FILL = 22.48
TOPSOIL EX = 14.52 TOPSOIL PLACE = 10.98

67 + 50.00

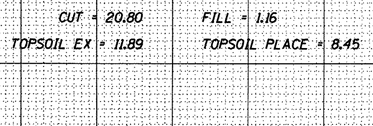
64 + 50.00



CUT = 0.00 FILL = 42.01
TOPSOIL EX = 11.45 TOPSOIL PLACE = 7.92

64 + 50.00

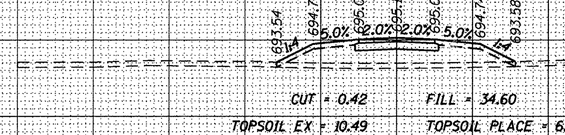
67 + 00.00



CUT = 20.80 FILL = 1.16
TOPSOIL EX = 11.89 TOPSOIL PLACE = 8.45

67 + 00.00

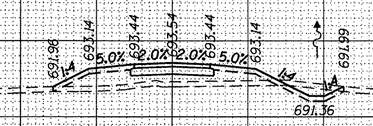
64 + 00.00



CUT = 0.42 FILL = 34.60
TOPSOIL EX = 10.49 TOPSOIL PLACE = 6.97

64 + 00.00

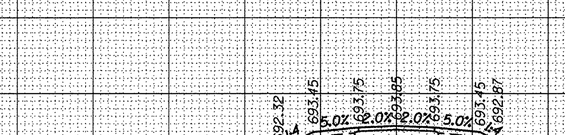
66 + 50.00



CUT = 4.55 FILL = 24.33
TOPSOIL EX = 12.82 TOPSOIL PLACE = 9.26

66 + 50.00

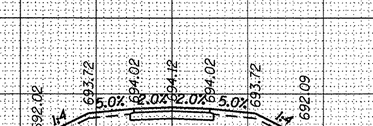
63 + 50.00



CUT = 0.00 FILL = 24.36
TOPSOIL EX = 9.67 TOPSOIL PLACE = 6.11

63 + 50.00

66 + 00.00



CUT = 0.00 FILL = 47.50
TOPSOIL EX = 11.76 TOPSOIL PLACE = 8.24

66 + 00.00

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

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE : 11/14/2016
FILE NAME : 4905-zzzz3.xsh
PLOT SCALE : 1:10
USER NAME : MColeman

CONTRACT NO. 61C67

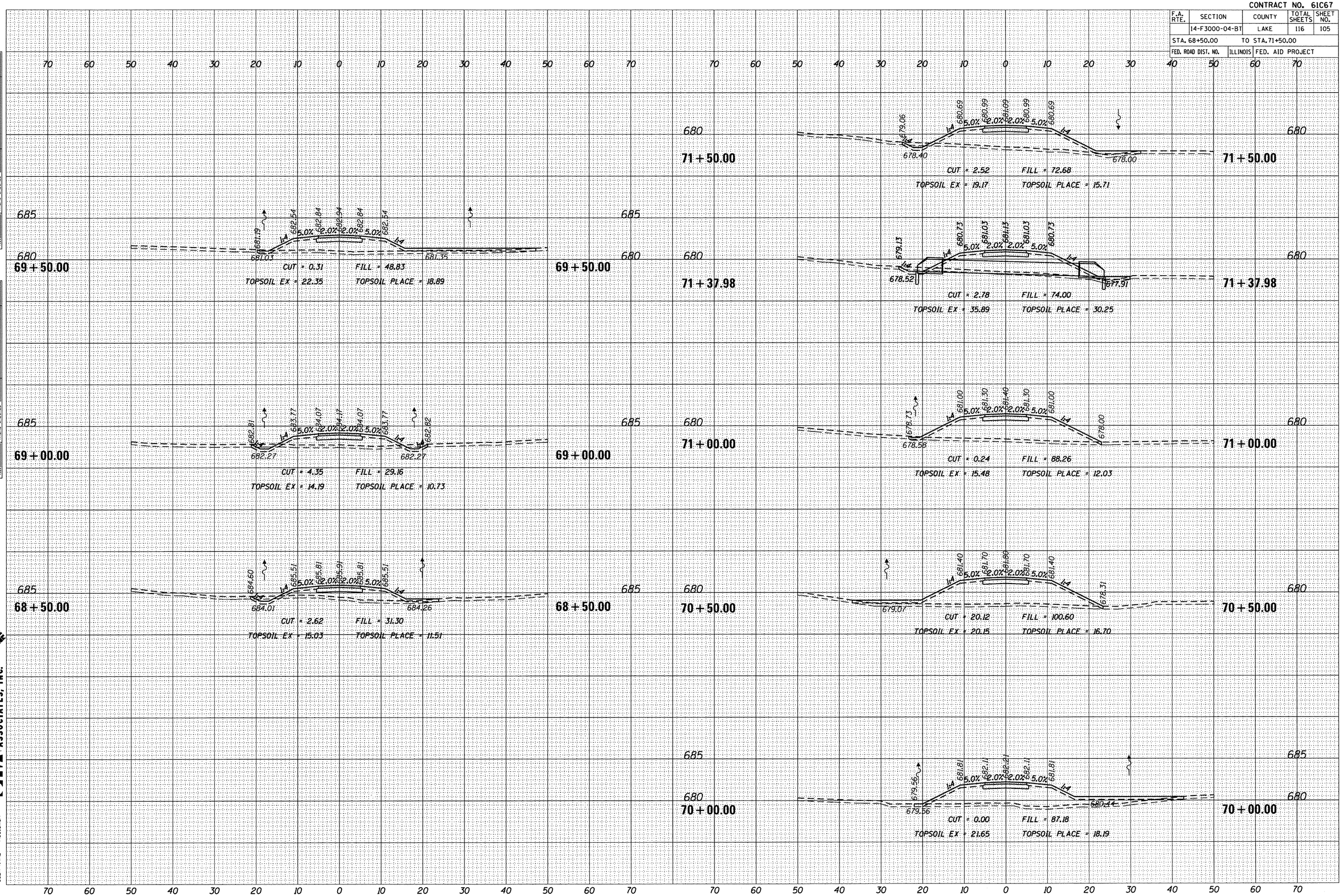
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	105

STA. 68+50.00 TO STA. 71+50.00

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

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

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



LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz23..ssh
PLOT SCALE = 1x10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	106
STA. 72+00.00		TO STA. 75+60.02		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

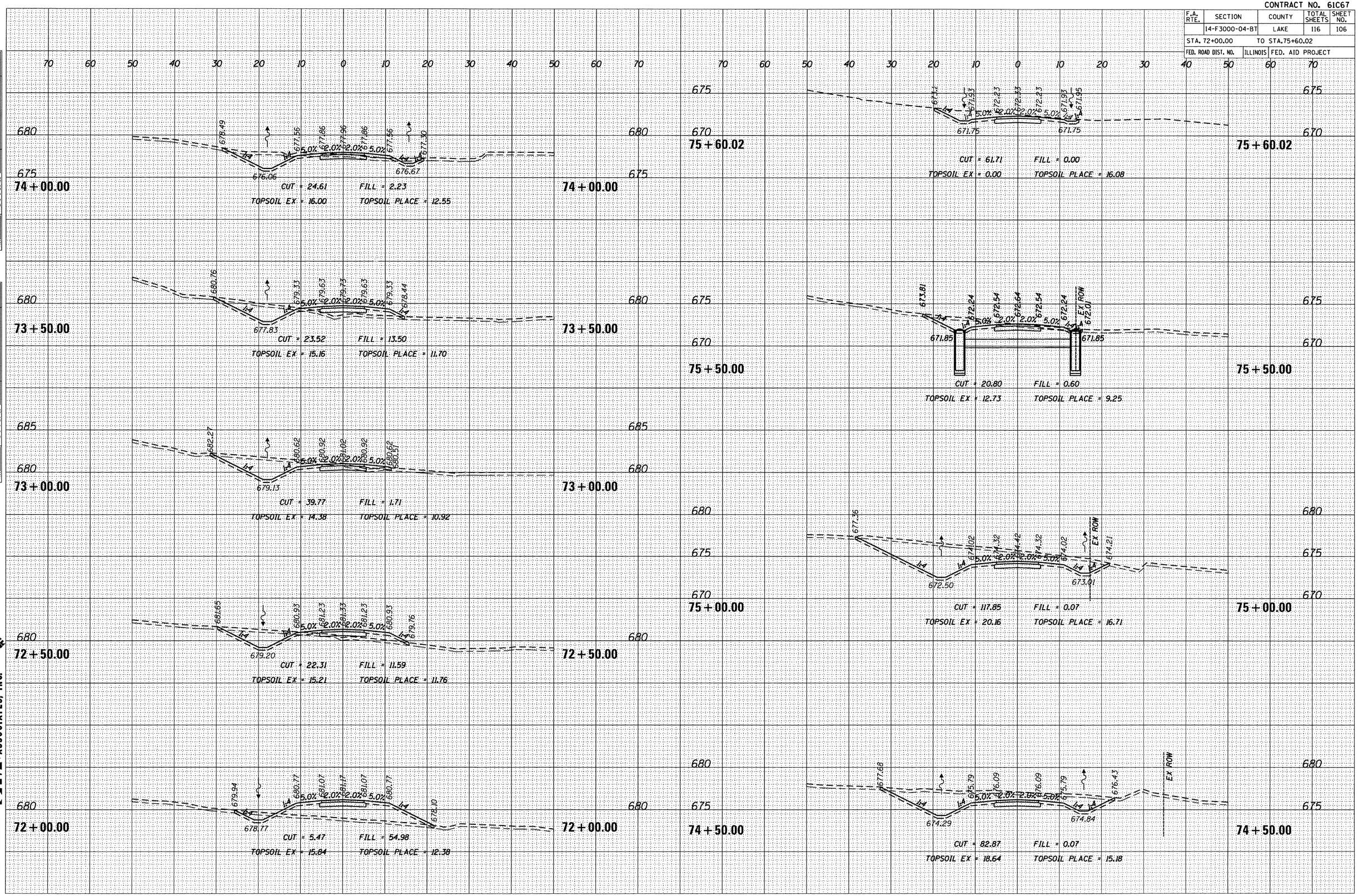
	DATE	BY
FINAL SURVEY NOTE BOOK NO.	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz3..xsm
PLOT SCALE = 1:10
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	107

STA. 75+75.00 TO STA.80+00.00

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

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

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

LAKE COUNTY FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzzz3.ssh
PLOT SCALE = 1i10
USER NAME = MColeman

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

77+50.00

668.61 667.72 667.82 667.72 667.54
667.45
2.0% 2.0%
CUT = 5.48 FILL = 0.07
TOPSOIL EX = 5.44 TOPSOIL PLACE = 1.68

77+00.00

669.88 669.83 669.93 669.83
669.39
2.0% 2.0%
CUT = 8.40 FILL = 0.03
TOPSOIL EX = 5.30 TOPSOIL PLACE = 1.76

76+50.00

671.71 671.99 672.09 671.93
2.0% 2.0%
CUT = 2.76 FILL = 0.07
TOPSOIL EX = 3.81 TOPSOIL PLACE = 0.31

76+00.00

75+75.00

80+00.00

662.16 661.25 663.55 663.65 663.55 661.25 660.32
661.75
1:4 5.0% 2.0% 2.0% 5.0% 1:4
CUT = 1.42 FILL = 49.20
TOPSOIL EX = 14.50 TOPSOIL PLACE = 11.05

79+50.00

663.02 663.60 663.90 664.00 663.90 663.60 661.67
662.10
1:4 5.0% 2.0% 2.0% 5.0% 1:4
CUT = 3.88 FILL = 37.84
TOPSOIL EX = 13.87 TOPSOIL PLACE = 10.42

79+00.00

663.31 664.37 664.67 664.77 664.67 664.37 662.44
663.07
1:4 5.0% 2.0% 2.0% 5.0% 1:4
CUT = 0.35 FILL = 48.35
TOPSOIL EX = 12.70 TOPSOIL PLACE = 9.24

78+50.00

665.27 665.14 665.44 665.54 665.45 665.15 663.89
664.04
1:4 5.0% 2.0% 2.0% 5.0% 1:4
CUT = 5.08 FILL = 20.97
TOPSOIL EX = 12.77 TOPSOIL PLACE = 9.40

78+00.00

666.80 665.95 666.25 666.35 666.25 665.95 665.14
665.84
1:4 5.0% 2.0% 2.0% 5.0% 1:4
CUT = 5.20 FILL = 6.03
TOPSOIL EX = 10.55 TOPSOIL PLACE = 7.05

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	108
STA. 80+47.75		TO STA. 83+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

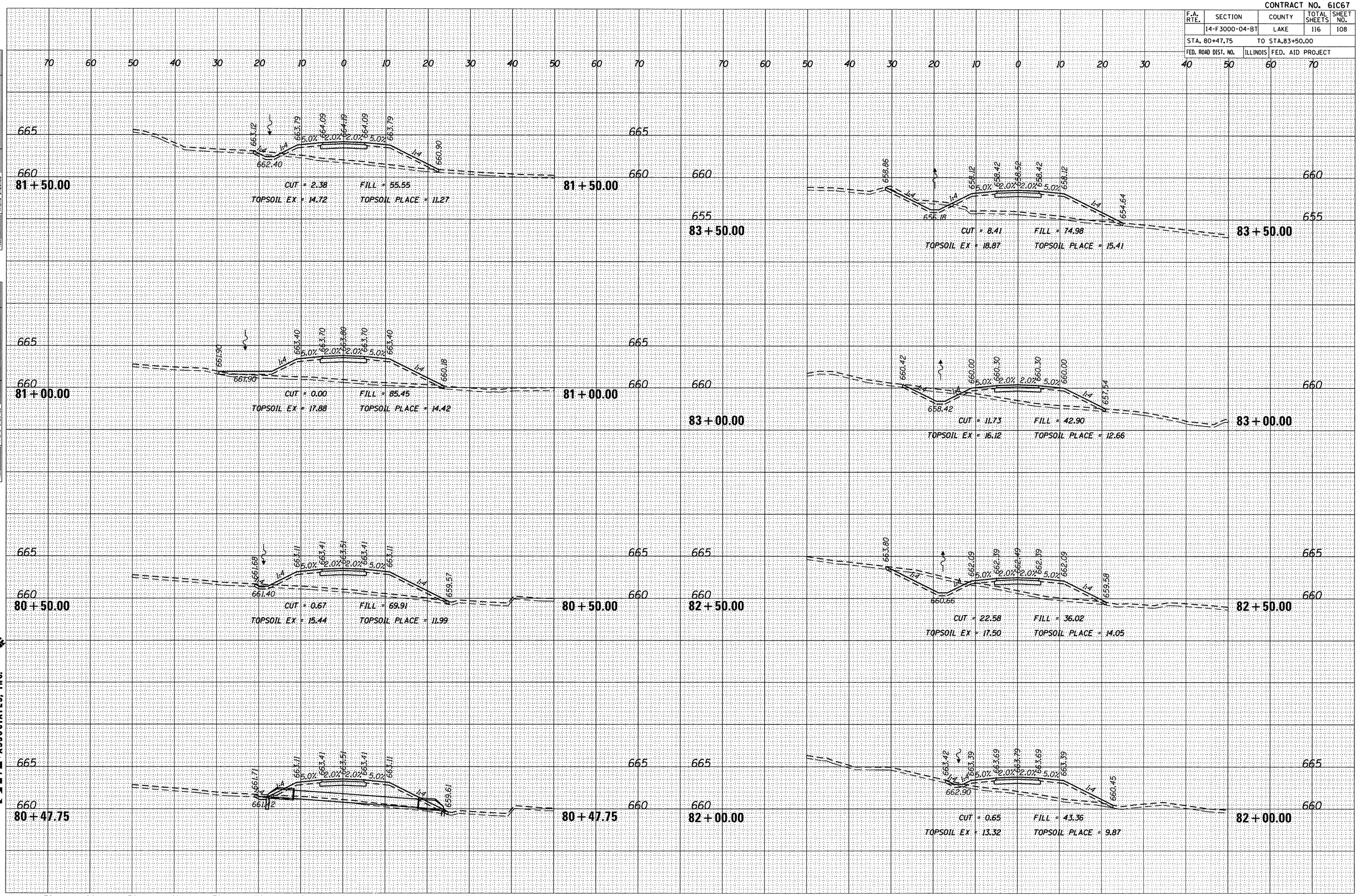
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz3..xsh
PLOT SCALE = 1\10
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	109
STA. 84+00.00	TO STA.87+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4985-zzzz3.xsh
PLOT SCALE = 1i10
USER NAME = MColeman

85 + 00.00

CUT = 0.03 FILL = 28.39
TOPSOIL EX = 11.66 TOPSOIL PLACE = 8.20

84 + 50.00

CUT = 0.04 FILL = 76.09
TOPSOIL EX = 14.78 TOPSOIL PLACE = 11.33

84 + 26.43

84 + 00.00

CUT = 29.76 FILL = 98.80
TOPSOIL EX = 21.92 TOPSOIL PLACE = 18.46

87 + 50.00

CUT = 56.35 FILL = 0.07
TOPSOIL EX = 18.23 TOPSOIL PLACE = 14.78

87 + 00.00

CUT = 10.62 FILL = 20.29
TOPSOIL EX = 15.15 TOPSOIL PLACE = 11.70

86 + 50.00

CUT = 0.00 FILL = 29.38
TOPSOIL EX = 12.32 TOPSOIL PLACE = 8.85

86 + 00.00

CUT = 0.00 FILL = 21.53
TOPSOIL EX = 8.94 TOPSOIL PLACE = 5.96

85 + 50.00

CUT = 0.00 FILL = 35.85
TOPSOIL EX = 10.79 TOPSOIL PLACE = 7.34

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	110

STA. 88+00.00 TO STA. 91+00.00

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 49085-zzz23.xsm
PLOT SCALE = 1:10
USER NAME = MColeman

89+50.00

655
650
652.99
653.10
653.40
653.50
653.40
653.10
652.89
5.0%
2.0%
2.0%
5.0%
1:4
1:4
651.60
651.60
653.00
BFE = 650.10

89+00.00

CUT = 18.92 FILL = 8.30
TOPSOIL EX = 16.31 TOPSOIL PLACE = 14.24

655
650
654.06
653.60
653.90
654.00
653.90
653.60
653.77
5.0%
2.0%
2.0%
5.0%
1:4
1:4
652.10
652.10

88+50.00

CUT = 44.37 FILL = 0.07
TOPSOIL EX = 17.57 TOPSOIL PLACE = 14.17

655
650
655.41
654.10
654.40
654.50
654.40
654.10
655.08
5.0%
2.0%
2.0%
5.0%
1:4
1:4
652.60
652.60

88+00.00

CUT = 89.58 FILL = 0.07
TOPSOIL EX = 19.79 TOPSOIL PLACE = 16.33

91+00.00

655
650
653.00
BFE = 650.10

90+50.00

655
650
655.00
BFE = 650.10

90+00.00

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

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	111
STA. 91+50.00		TO STA.94+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

	DATE	BY
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

FINAL SURVEY NOTE BOOK NO.

ORIGINAL SURVEY NOTE BOOK NO.

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3-xssht
PLOT SCALE = 1:10
USER NAME = MColeman

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

655
650

92+50.00

653.00

BFE = 650.10

92+50.00

94+50.00

649.77 648.22 646.32 648.22 649.00 650.00
5:1 5:1 2.0% 2.0% 5:1 4:1 4:1
647.24 646.88

CUT = 111.41 FILL = 0.00
TOPSOIL EX = 20.97 TOPSOIL PLACE = 17.57

94+50.00

92+00.00

653.00

BFE = 650.10

92+00.00

94+00.00

650.42 649.32 649.42 649.32 650.03
5:1 2.0% 2.0% 5:1 4:1 4:1
649.17 649.11

CUT = 61.37 FILL = 0.00
TOPSOIL EX = 12.83 TOPSOIL PLACE = 9.40

94+00.00

91+50.00

653.00

BFE = 650.10

91+50.00

93+50.00

651.0 650.51 650.61 650.51 651.02
4:1 10:1 2.0% 2.0% 4:1 4:1
649.87 649.87

CUT = 54.48 FILL = 0.00
TOPSOIL EX = 12.62 TOPSOIL PLACE = 9.23

93+50.00

91+00.00

651.26 651.71 651.81 651.71 651.39
4:1 2.0% 2.0% 4:1 4:1

CUT = 21.98 FILL = 0.00
TOPSOIL EX = 4.10 TOPSOIL PLACE = 0.64

93+00.00

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	112
STA. 94+73.50		TO STA.98+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz23.xsh
PLOT SCALE = 1:10
USER NAME = MColeman

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

650

96 + 50.00

648.12 5.8% 648.71 2.0% 646.81 2.0% 648.71 641.88 646.75

CUT = 5.75 FILL = 8.55

TOPSOIL EX = 10.25 TOPSOIL PLACE = 6.97

96 + 00.00

648.30 647.82 2.0% 641.92 2.0% 647.82 648.47 646.87 646.75

CUT = 43.08 FILL = 0.00

TOPSOIL EX = 12.25 TOPSOIL PLACE = 8.54

95 + 50.00

648.93 647.63 2.0% 641.73 2.0% 641.63 646.39 646.65 646.56

CUT = 72.46 FILL = 0.00

TOPSOIL EX = 13.68 TOPSOIL PLACE = 10.24

95 + 00.00

649.61 647.78 2.0% 641.88 2.0% 647.78 649.00 649.50 649.00 650.94 646.43 646.38

CUT = 84.23 FILL = 12.38

TOPSOIL EX = 25.98 TOPSOIL PLACE = 22.20

94 + 73.50

649.49 641.93 2.0% 646.03 2.0% 641.93 649.95 646.39 646.30

98 + 00.00

649.01 646.49 5.0% 648.79 2.0% 646.89 2.0% 648.79 5.0% 646.49 649.00 646.89 646.80

CUT = 118.05 FILL = 0.00

TOPSOIL EX = 24.70 TOPSOIL PLACE = 23.11

97 + 50.00

649.39 649.29 649.39 649.29 649.52 5.0% 2.0% 2.0% 5.0%

CUT = 6.91 FILL = 0.00

TOPSOIL EX = 5.84 TOPSOIL PLACE = 2.22

97 + 37.94

649.90 649.52 649.52 650.03 4.1% 4.1%

BUTRICK STREET EAST SIDEWALK

97 + 00.00

BUTRICK STREET

96 + 82.67

649.18 649.37 649.42 649.37 649.12 5.0% 1.0% 1.0% 5.0%

BUTRICK STREET WEST R.O.W.

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	113
STA. 98+50.00	TO STA 102+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

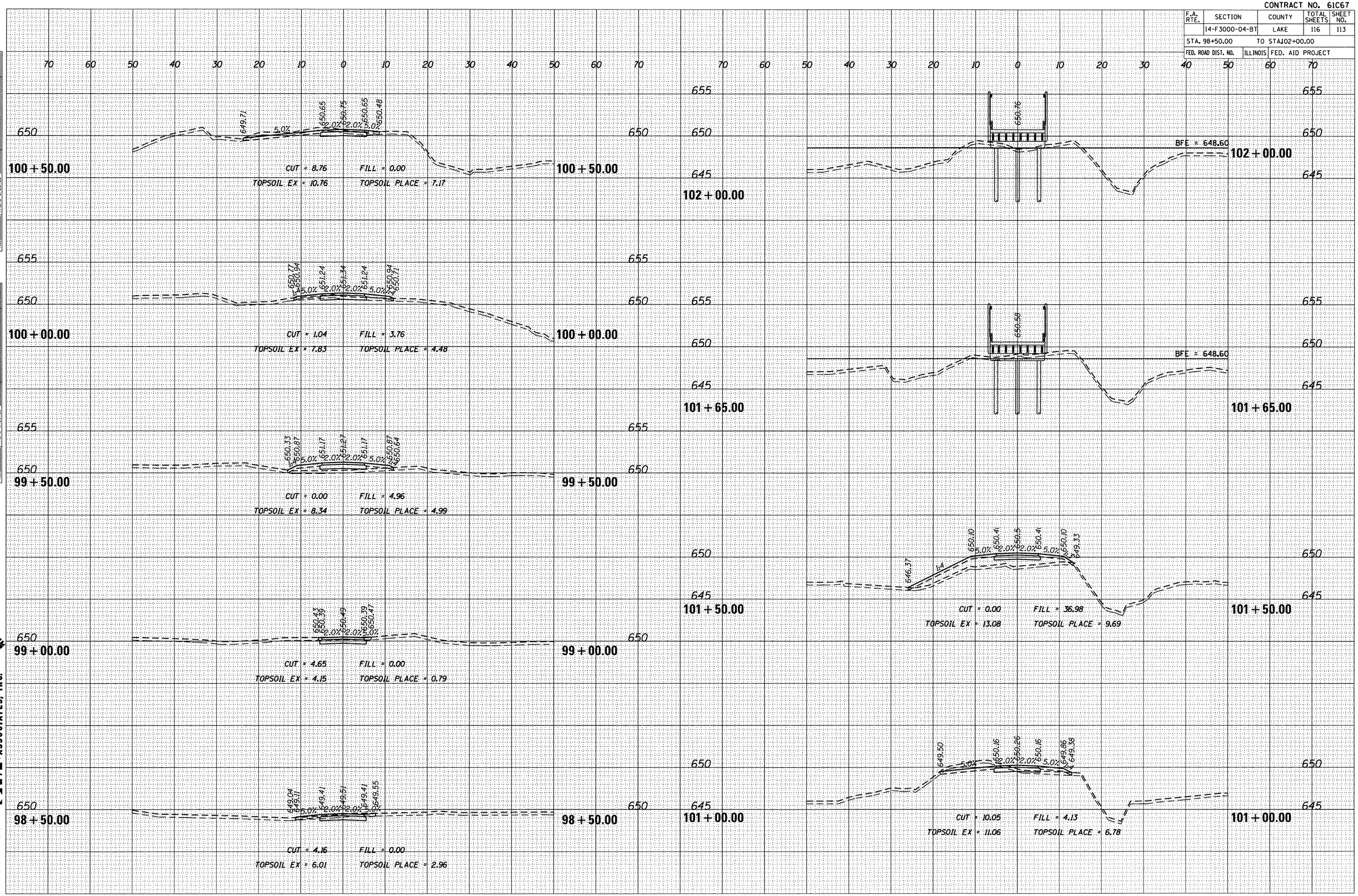
FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE AREAS — AREAS CHECKED — BY — DATE

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

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzzz3..ssh
PLOT SCALE = 1:10
USER NAME = MColeman



CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	114
STA.102+50.00	TO STA.103+10.57			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

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

655

103 + 10.57

651.94 0.6% 652.08 1.2% 652.38

ROBERT McCLORY
BIKE TRAIL
WEST EDGE OF TRAIL

CUT = 21.00 FILL = 0.00
TOPSOIL EX = 16.79 TOPSOIL PLACE = 0.00

655

103 + 00.00

651.35 651.46 5.0% 651.76 2.0% 651.86 2.0% 651.76 5.0% 651.51

CUT = 0.15 FILL = 2.74
TOPSOIL EX = 6.63 TOPSOIL PLACE = 3.09

655
650
645

102 + 75.00

651.13

BFE = 648.60

655
650
645

102 + 50.00

651.01

BFE = 648.60

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

LAKE COUNTY
FOREST PRESERVES

GHA GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz3..xsm
PLOT SCALE = 1:10
USER NAME = MColeman

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	115
STA.202+50.00	TO STA204+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

	DATE	BY
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

FINAL SURVEY NOTE BOOK NO.

	DATE	BY
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY NOTE BOOK NO.

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz23..vsm
PLOT SCALE = 1:10
USER NAME = NColeman

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

695 690 685 680

686.35 686.54 686.44 686.13 685.17
0.4% 2.0% 1.4 1.4

CUT = 19.48 FILL = 1.17
TOPSOIL EX =14.37 TOPSOIL PLACE = 2.89

203 + 28.16

686.56 686.64 686.74 686.64 686.57 685.40
2.0% 2.0% 1.4 1.4

CUT = 5.93 FILL = 3.74
TOPSOIL EX =13.47 TOPSOIL PLACE = 10.07

203 + 00.00

686.9 687.17 687.47 687.17 688.54 685.90
1.9 2.0% 2.0% 1.4 1.4

CUT = 35.07 FILL = 0.07
TOPSOIL EX =11.41 TOPSOIL PLACE = 7.92

202 + 50.00

204 + 00.00

686.60 686.70 687.99 685.90
2.0% 1.5 1.4 2.0% 4.3%

CUT = 20.25 FILL = 0.00
TOPSOIL EX =4.67 TOPSOIL PLACE = 4.23

203 + 72.33

686.47 686.47 686.57 686.47 687.49 685.80 685.00
1.4 2.0% 2.0% 1.9 1.4

CUT = 16.93 FILL = 3.80
TOPSOIL EX = 12.80 TOPSOIL PLACE = 11.28

203 + 50.00

CONTRACT NO. 61C67

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-F3000-04-BT	LAKE	116	116

STA.200+00.00 TO STA.202+15.67

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

FINAL SURVEY	BY	DATE
NOTE BOOK		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

LAKE COUNTY FOREST PRESERVES

GEWALT HAMILTON ASSOCIATES, INC.

PLOT DATE = 11/14/2016
FILE NAME = 4905-zzz23.ssslt
PLOT SCALE = 1x10
USER NAME = MColeman