TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
UNIT DUCT	UD	
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		
UNINTERRUPTABLE POWER SUPPLY	UPS	UPS
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H "E"
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
PEDESTRIAN PUSH BUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE	"E"	"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
IMAGE SENSOR		
DOME PAN/TILT/ZOOM (PTZ) CAMERA		
L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN		
VIDEO DETECTOR ZONE (APPROXIMATE LOCATION)		

SCHEDULE OF COMBINATION MAST ARM ASSEMBLY AND POLES

MA-1	34' MAST ARM, 20' LUMINAIRE ARM WITH IMAGE SENSOR, 45' MOUNTING HEIGHT
MA-2	36' MAST ARM, 20' LUMINAIRE ARM WITH IMAGE SENSOR, 45' MOUNTING HEIGHT
MA-3	42' MAST ARM, 20' LUMINAIRE ARM WITH IMAGE SENSOR, 45' MOUNTING HEIGHT

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

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS
H-1	174+19	55' RT	6" GAS
H-2	175+54	49' RT	NONE
H-3	175+54	49' LT	ELEC
H-4	174+19	55' LT	18" WATERMAIN
P-1	175+41	59' LT	NONE
P-2	174+53	58' LT	NONE
MA-1	174+51	43' RT	NONE
MA-2	175+33	50' RT	NONE
MA-3	174+27	56' LT	18" WATERMAIN

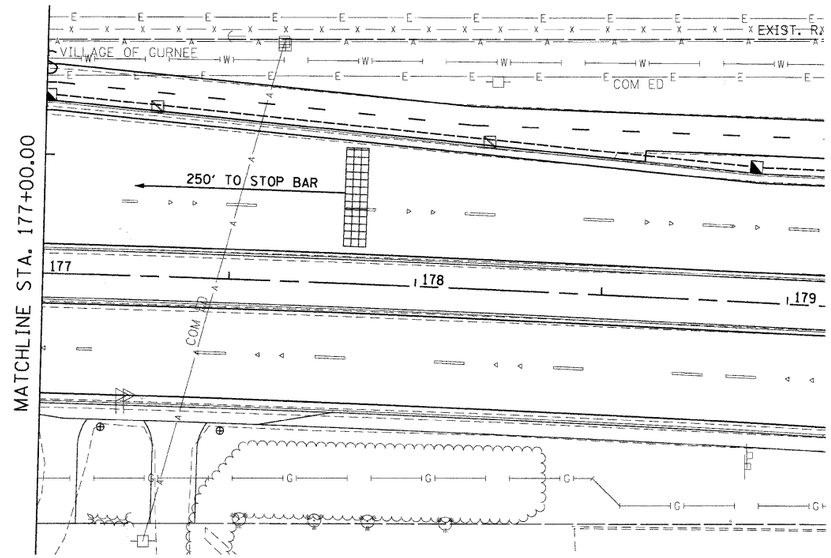
SCOPE OF WORK

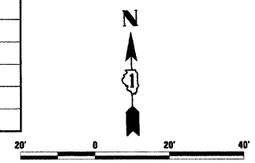
TEMPORARY SIGNAL.
REMOVE EXISTING SIGNAL.
INSTALL NEW SIGNAL WITH AUTOSCOPE AND PTZ CAMERAS AND FIBER OPTIC INTERCONNECT.

SIGN (A)



R10-4b
2 REQUIRED
(INCIDENTAL TO PAY ITEM
PEDESTRIAN PUSH-BUTTON)

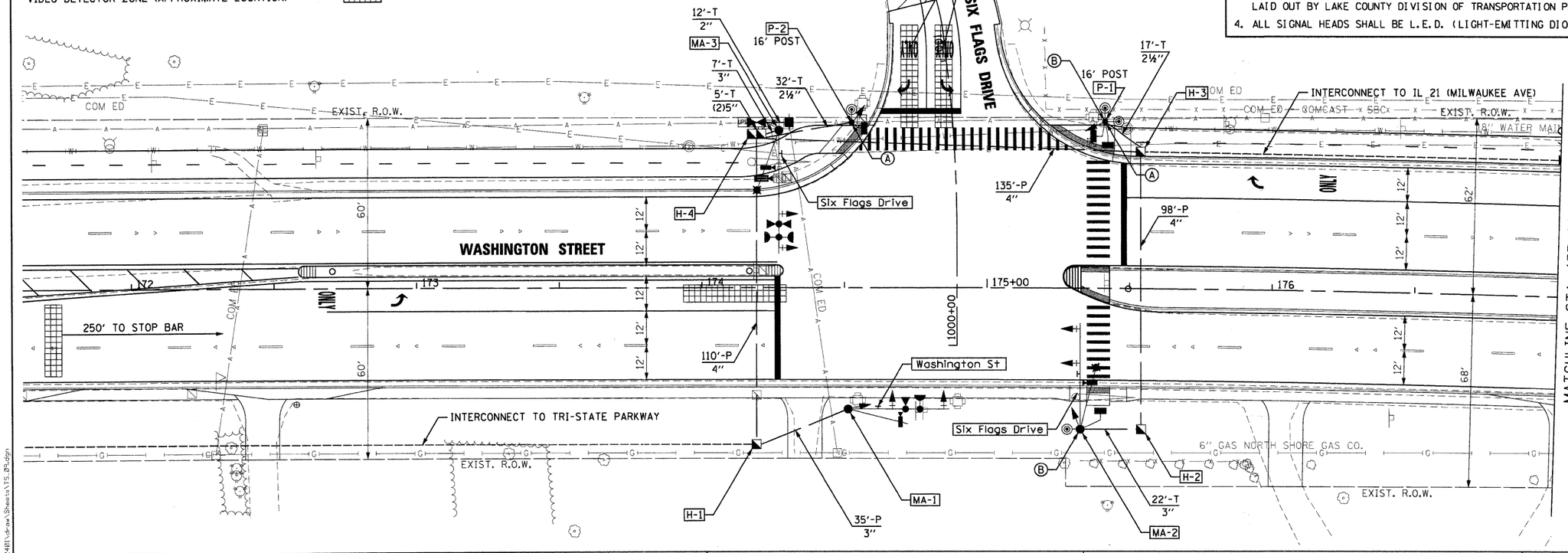




PAVEMENT MARKING SYMBOLS SHOWN FOR INFORMATION (SEE PAVEMENT MARKING PLAN SHEETS FOR PROPOSED LOCATIONS)

TRAFFIC SIGNAL NOTES

1. ALL STATIONS AND OFFSETS ARE DIMENSIONED FROM THE CENTERLINE OF WASHINGTON STREET UNLESS OTHERWISE INDICATED.
2. THE VIDEO VEHICLE DETECTION SYSTEM'S MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE ASSISTANCE IN ALL CABLE TERMINATIONS.
3. ALL DETECTION ZONES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.
4. ALL SIGNAL HEADS SHALL BE L.E.D. (LIGHT-EMITTING DIODE).



SIGN (B)



R10-4b
2 REQUIRED
(INCIDENTAL TO PAY ITEM
PEDESTRIAN PUSH-BUTTON)

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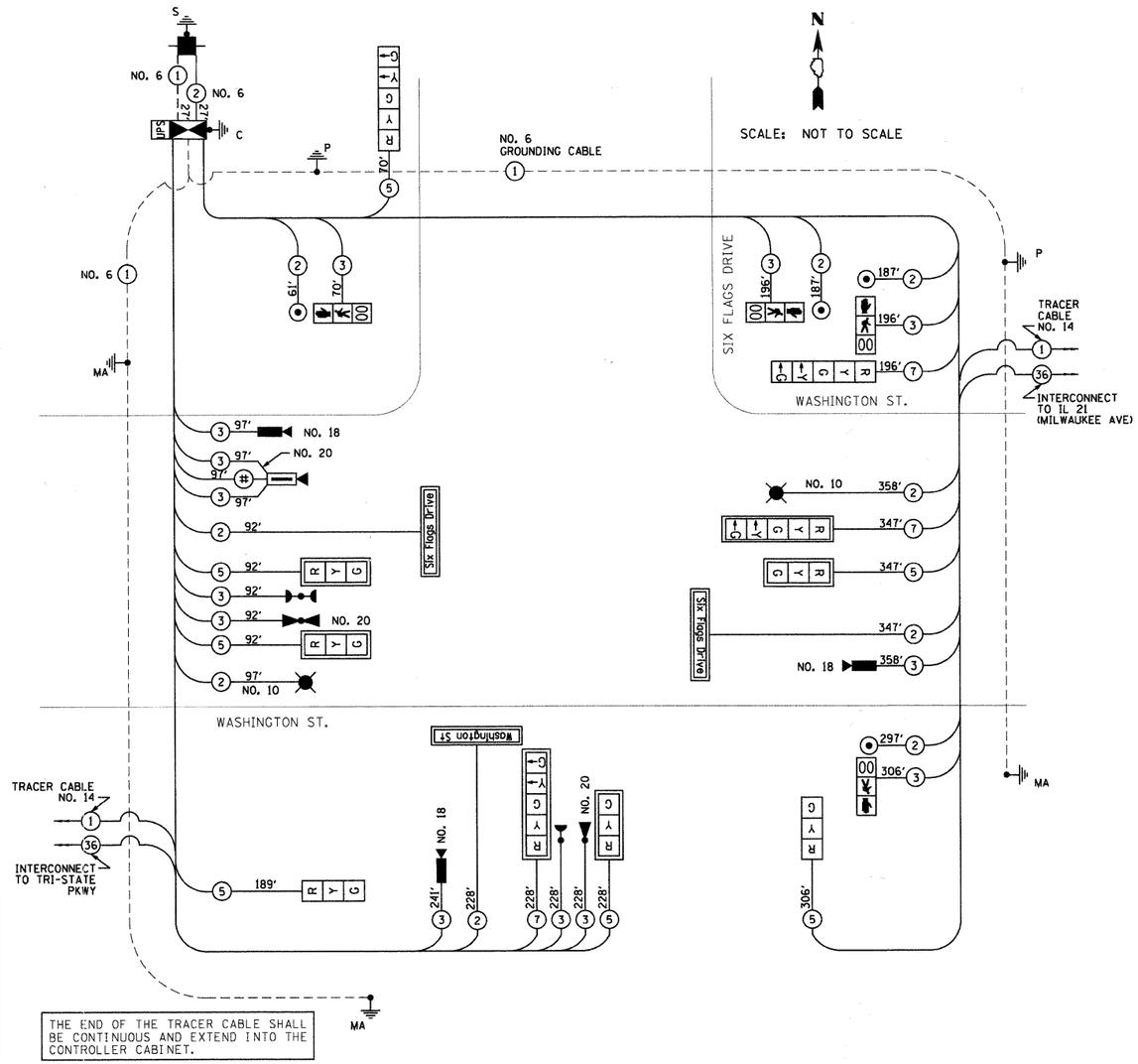
LakeCounty
Division of Transportation

WASHINGTON STREET – TRAFFIC SIGNAL PLAN
WASHINGTON STREET AT SIX FLAGS DRIVE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	101
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

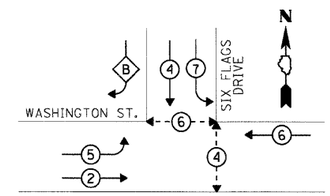
ITEM	UNIT	QUANTITY
HANDHOLE	EACH	3
DOUBLE HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 2-1/C NO. 10	FOOT	454
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 250 WATT	EACH	2
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,397
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,183
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,252
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	840
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	27
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT. (SPECIAL)	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE D	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	33
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	6
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	4
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	5
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	12
CONDUIT IN TRENCH, 2½" DIA., GALVANIZED STEEL	FOOT	49
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	29
CONDUIT IN TRENCH, 5" DIA., GALVANIZED STEEL	FOOT	10
CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	35
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	343
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	762
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	320
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	97
ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 3C	FOOT	97
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	2
L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	3
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
LAYER II (DATALINK) SWITCH	EACH	1
UNINTERRUPTABLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, NO. 18 3C, VIDEO	FOOT	695
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1



CABLE PLAN
NOT TO SCALE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" TRAFFIC SIGNAL SECTION
R	R	12" TRAFFIC SIGNAL SECTION
W	W	12" PEDESTRIAN SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(36)	(36)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
		STREET LIGHT LUMINAIRE
R Y G ← → ⊕	R Y G ← → ⊕	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P/MA	P/MA	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		DOME PAN/TILT/ZOOM (PTZ) CAMERA
		PROPOSED IMAGE SENSOR
UPS	UPS	UNINTERRUPTABLE POWER SUPPLY
ST. NAME	ST. NAME	L.E.D INTERNALLY ILLUMINATED STREET NAME SIGN
(#)		COAXIAL CABLE (BELDEN 8281) NO. 20



OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
B	=	4	+	5

PHASE DESIGNATION DIAGRAM

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	10	—	10	0.50	50
(YELLOW)	10	—	19	0.10	19
(GREEN)	10	—	11	0.40	44
ARROW	8	—	9	0.10	8
PED SIGNAL	4	—	9	1.00	36
CONTROLLER	1	—	100	1.00	100
VIDEO SYSTEM	1	—	150	1.00	150
LUMINAIRE	2	—	250	0.50	250
L.E.D. ST. SIGNS	3	—	64	0.50	96
BATTERY BACKUP	1	—	25	1.00	25
				TOTAL =	778

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

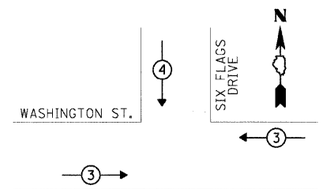
ENERGY COSTS TO: LAKE COUNTY DIVISION OF TRANSPORTATION
600 WINCHESTER ROAD
LIBERTYVILLE, IL 60048

ENERGY SUPPLY: CONTACT: MS. TERRI BLECK
PHONE: (847) 816-5234
COMPANY: COMED

FOUNDATION (DEPTH)	FT.
TYPE A - POST	4
D - CONTROLLER	4
E - MAST ARM POLE	15

CABLE SLACK	FT.
HANDHOLE	6.5
DOUBLE HANDHOLE	13
SIGNAL POST	2
CONTROLLER CABINET	1
FIBER OPTIC	13
ELECTRIC SERVICE	1
GROUND CABLE	1

VERTICAL	FT.
ALL FOUNDATIONS	3.5
MAST ARM (L) POLE	20+L-2=
BRACKET MOUNTED	13
PEDESTRIAN PUSHBUTTON	4
ELECTRIC SERVICE	13.5
SERVICE TO GROUND	13.5
POST MOUNTED	



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓

PHASE DESIGNATION DIAGRAM LEGEND

- VEHICULAR MOVEMENT - DUAL ENTRY PHASE
- VEHICULAR MOVEMENT - SINGLE ENTRY PHASE
- PEDESTRIAN MOVEMENT
- OVERLAP MOVEMENT
- * NUMBER REFERS TO ASSOCIATED PHASE

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CHECKED - KDN
DATE - 05/29/09

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REVISED -
REVISED -
REVISED -

LakeCounty Division of Transportation

WASHINGTON STREET – SIGNAL CABLE PLAN
WASHINGTON STREET AT SIX FLAGS DRIVE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	102
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

INTERCONNECT PLAN LEGEND

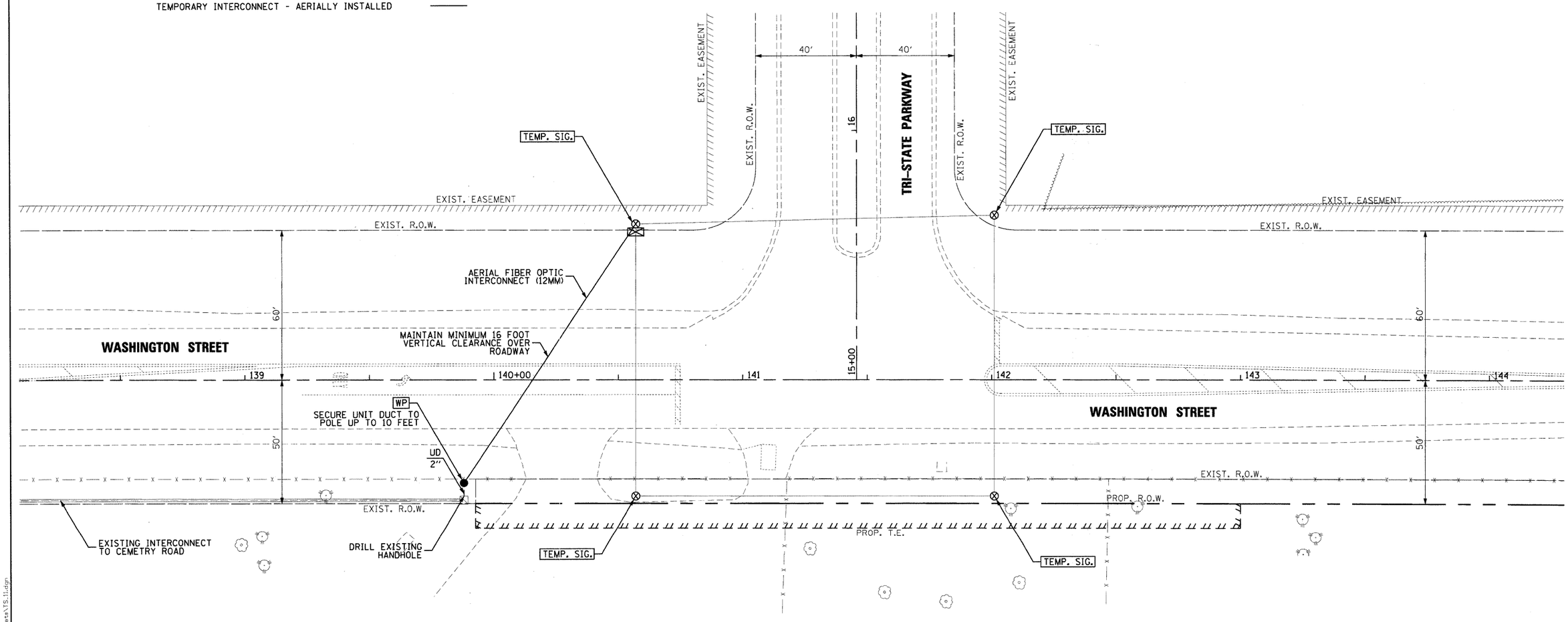
	PROPOSED	EXISTING
CONTROLLER	▬	▭
UNIT DUCT	UD	
HANDHOLE	◥	◹
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◥◤	◹◸
G.S. CONDUIT	- - - -	═══
HANDHOLE TO BE REMOVED		"E" ◹
WOOD POLE - SIGNAL	⊗	
WOOD POLE - INTERCONNECT	●	
TEMPORARY INTERCONNECT - AERIALLY INSTALLED	———	

N

20' 0 20' 40'

SCALE: 1" = 20'

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS
WP	139+88	42' RT	NONE



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LakeCounty
Division of Transportation

WASHINGTON STREET – TEMPORARY INTERCONNECT PLAN
WASHINGTON STREET AT TRI-STATE PARKWAY

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	103
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS
WP-1	177+90	64' LT	WATERMAIN, COMED/COMCAST/SBC AERIAL
WP-2	179+89	57' LT	NONE

INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▪	▫
UNIT DUCT	UD	
HANDHOLE	◪	▫
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◪◪	▫▫
G.S. CONDUIT	----	====
HANDHOLE TO BE REMOVED		"E" ▫
WOOD POLE - SIGNAL	⊗	
WOOD POLE - INTERCONNECT	●	
TEMPORARY INTERCONNECT - AERIALLY INSTALLED	———	

N

SCALE: 1" = 20'

SIX FLAGS DRIVE

TEMP. SIG.

TEMP. SIG.

EXISTING HANDHOLE TO BE REMOVED

EXISTING HANDHOLE TO BE REMOVED

AERIAL FIBER OPTIC INTERCONNECT (12MM)

WP-1

EXISTING INTERCONNECT TO IL 21 (MILWAUKEE AVE)

WP-2

SECURE UNIT DUCT TO POLE UP TO 10 FEET

UD 2"

DRILL EXISTING HANDHOLE

EXIST. R.O.W.

EXIST. R.O.W.

62'

68'

1001

1000+00

174

175+00

176

177

178

179

180+00

WASHINGTON STREET

EXIST. R.O.W.

EXIST. R.O.W.

TEMP. SIG.

TEMP. SIG.

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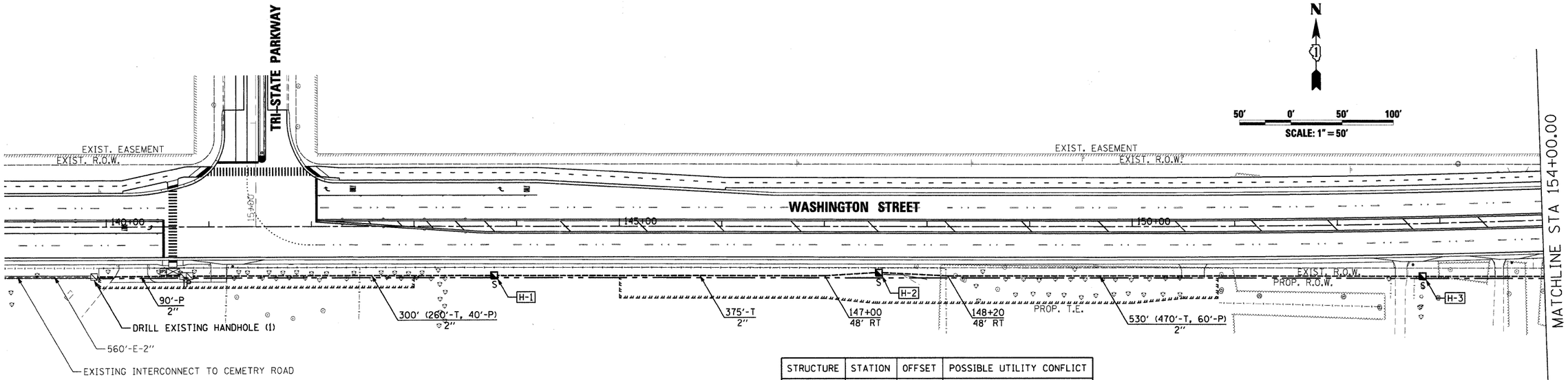
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LakeCounty
Division of Transportation

WASHINGTON STREET – TEMPORARY INTERCONNECT PLAN
WASHINGTON STREET AT SIX FLAGS DRIVE

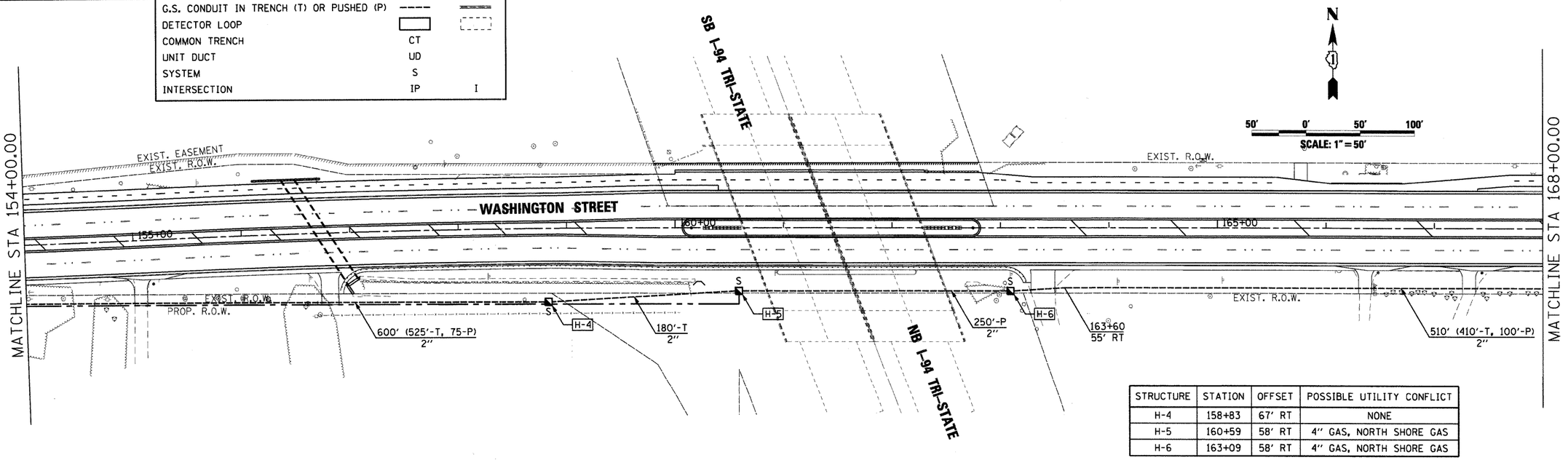
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	104
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	143+78	48' RT	NONE
H-2	147+53	45' RT	NONE
H-3	152+83	51' RT	NONE

INTERCONNECT PLAN LEGEND		
	PROPOSED	EXISTING
CONTROLLER	▣	▣
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◪◪	◪◪
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	----	═══
DETECTOR LOOP	▭	▭
COMMON TRENCH	CT	
UNIT DUCT	UD	
SYSTEM	S	
INTERSECTION	IP	I



STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-4	158+83	67' RT	NONE
H-5	160+59	58' RT	4" GAS, NORTH SHORE GAS
H-6	163+09	58' RT	4" GAS, NORTH SHORE GAS

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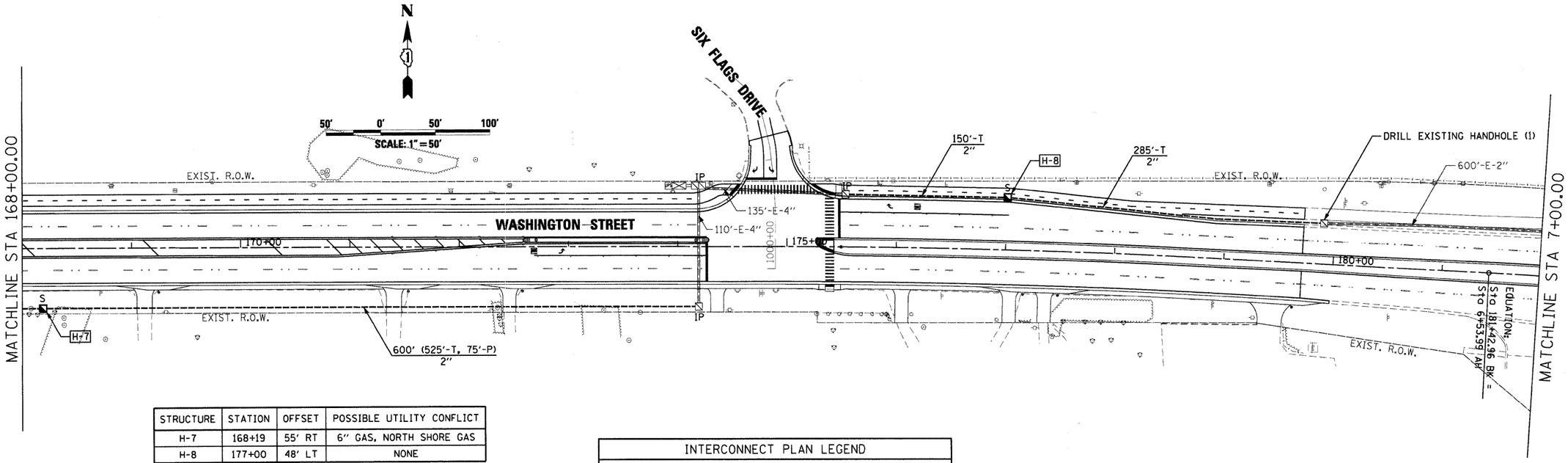
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Division of Transportation

WASHINGTON STREET – INTERCONNECT PLAN

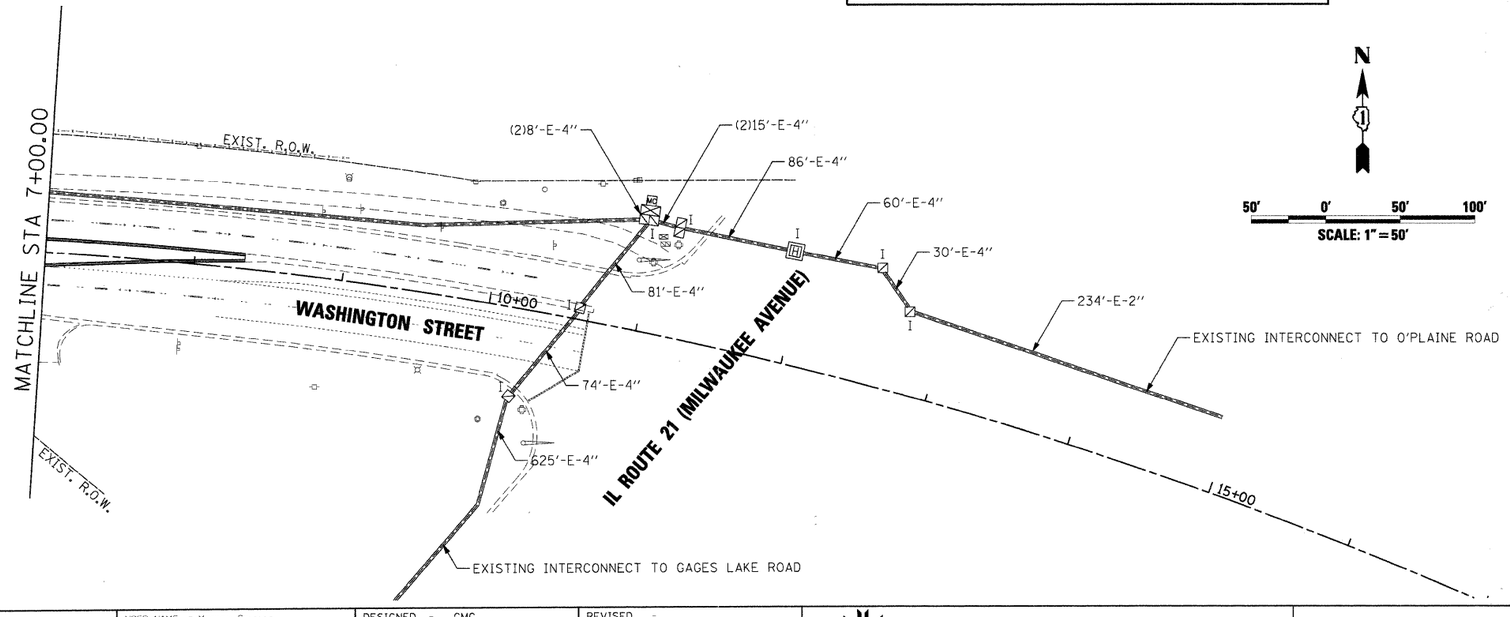
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	105
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-7	168+19	55' RT	6" GAS, NORTH SHORE GAS
H-8	177+00	48' LT	NONE

INTERCONNECT PLAN LEGEND		
	PROPOSED	EXISTING
CONTROLLER	▬	⊠
HANDHOLE	◥	◹
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◥◤	◹◿
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	----	═══
DETECTOR LOOP	▭	▭
COMMON TRENCH	CT	
UNIT DUCT	UD	
SYSTEM	S	
INTERSECTION	IP	I



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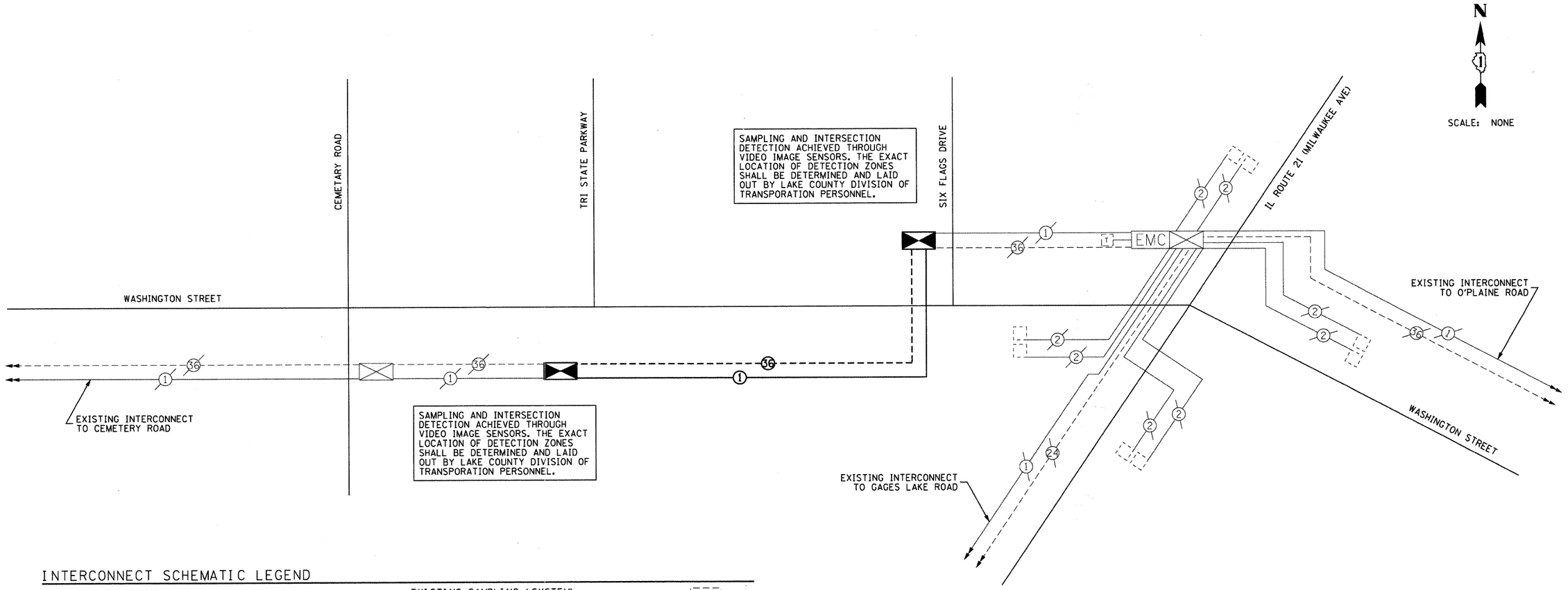
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PLOT DATE = 07/15/09	DATE - 07/15/09	REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – INTERCONNECT PLAN

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	106
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



INTERCONNECT SCHEMATIC LEGEND

EXISTING INTERSECTION CONTROLLER	⊠	EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS	ESPD
PROPOSED INTERSECTION CONTROLLER	⧓	PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS	PSPD
EXISTING MASTER CONTROLLER	EMC	EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	36
PROPOSED MASTER CONTROLLER	MC	PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	36
MASTER MASTER CONTROLLER	MMC	EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	24
EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS		PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	24
PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS		EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	12
EXISTING INTERSECTION LOOP DETECTORS PROPOSED SAMPLING (SYSTEM) DETECTORS	P	PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	12
EXISTING SAMPLING (SYSTEM) DETECTORS	ES	EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	6
PROPOSED SAMPLING (SYSTEM) DETECTORS	PS	PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	6
EXISTING SAMPLING (SYSTEM) DETECTORS. PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS.	ESP	EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	2
EXISTING SAMPLING (SYSTEM) DETECTORS. PROPOSED SAMPLING (SYSTEM) DETECTORS.	ESPS	PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	2
EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	PD	EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)	1
PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	PD	PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)	1
EXISTING TELEPHONE CONNECTION	T		
PROPOSED TELEPHONE CONNECTION	T		

ITEM	UNIT	QUANTITY
HANDHOLE	EACH	8
DRILL EXISTING HANDHOLE	EACH	2
REMOVE EXISTING HANDHOLE	EACH	2
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	3,180
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	690
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	4,362
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 36 FIBER (MM12F AND SM24F)	FOOT	4,362
TEMPORARY TRAFFIC SIGNAL INTERCONNECT	EACH	1
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	L SUM	1

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PLOT SCALE = 400.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

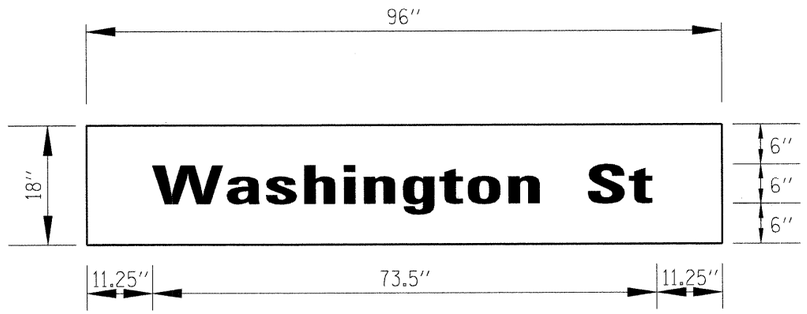
WASHINGTON STREET – INTERCONNECT SCHEMATIC

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	107
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PANEL DESIGN TYPE 1

ALL DIMENSIONS SHOWN IN INCHES



12.00 SQ. FT. EACH

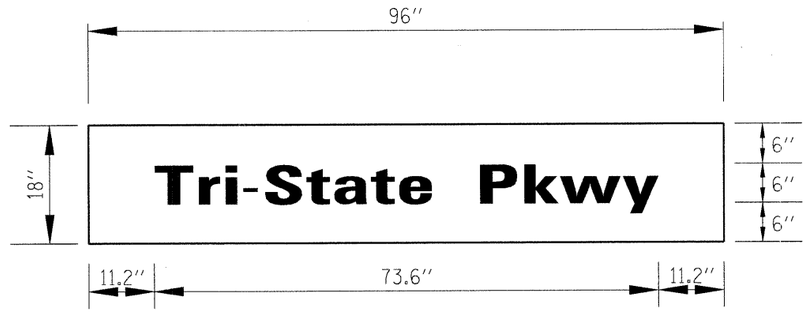
2 REQUIRED

X SINGLE SIDED REQUIRED

____ DOUBLE SIDED REQUIRED

DESIGN SERIES: CLEARVIEW-5-W FONT

NOTE: L.E.D. ILLUMINATED STREET NAME SIGNS AVAILABLE ONLY IN 2 FOOT INCREMENTS.



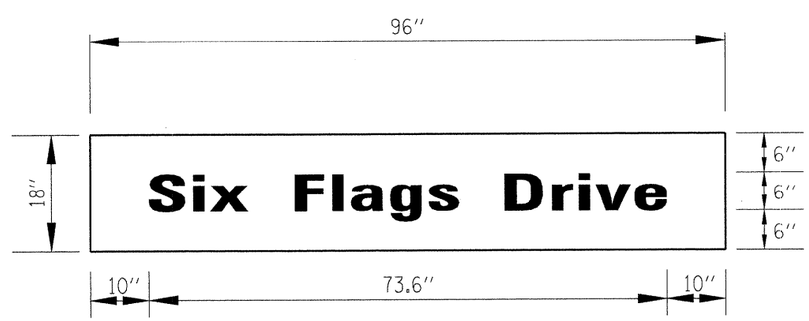
12.00 SQ. FT. EACH

2 REQUIRED

____ SINGLE SIDED REQUIRED

X DOUBLE SIDED REQUIRED

DESIGN SERIES: CLEARVIEW-5-W FONT



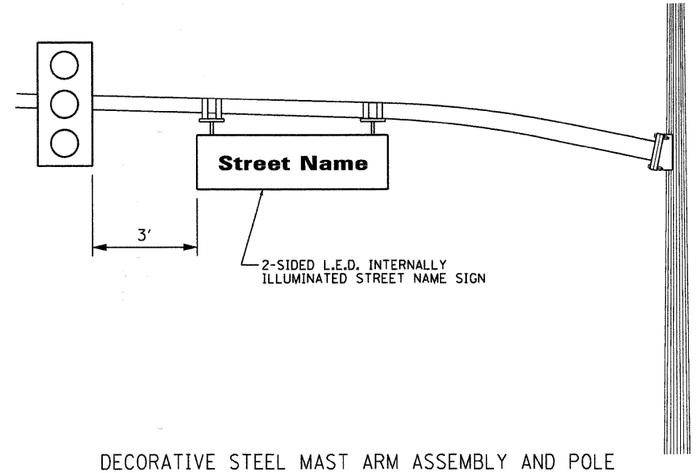
12.00 SQ. FT. EACH

2 REQUIRED

____ SINGLE SIDED REQUIRED

X DOUBLE SIDED REQUIRED

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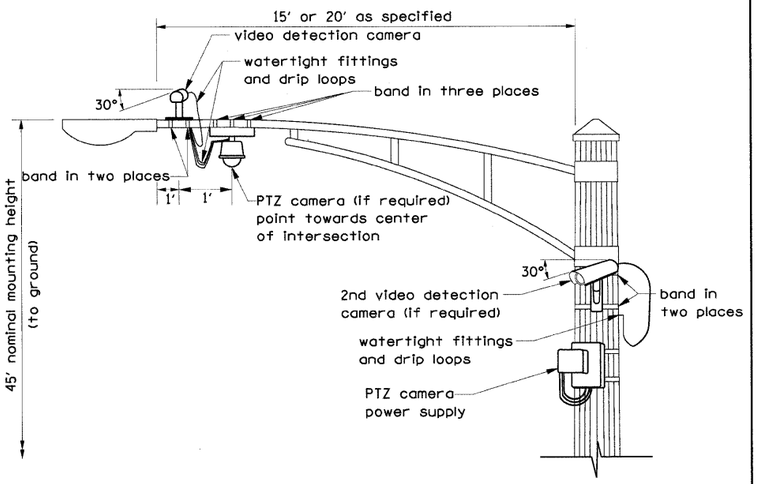


DECORATIVE STEEL MAST ARM ASSEMBLY AND POLE

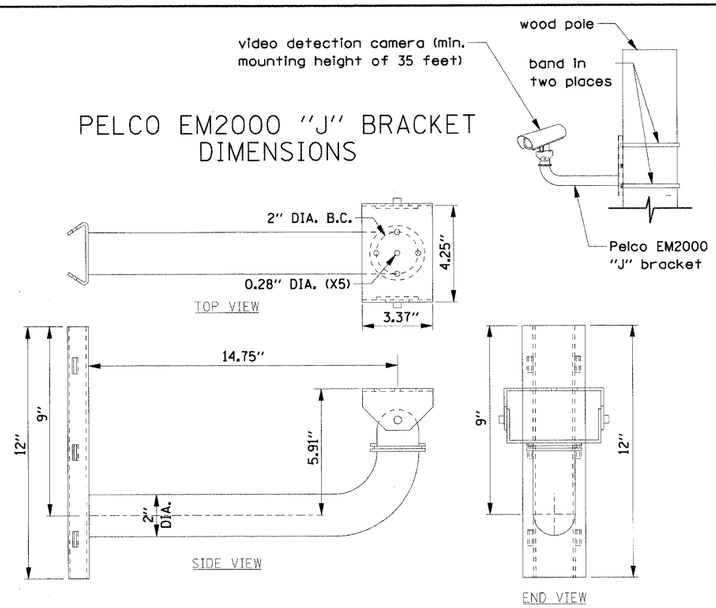
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CMT ©Copyright CMT, Inc. CRAWFORD, MURPHY & TILLY, INC. CONSULTING ENGINEERS License No. 184-000613	USER NAME = Steve Prange	DESIGNED - SJP	REVISED -	LakeCounty Division of Transportation	MAST ARM MOUNTED STREET NAME SIGNS
		DRAWN - SJP	REVISED -		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - KDN	REVISED -		
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.

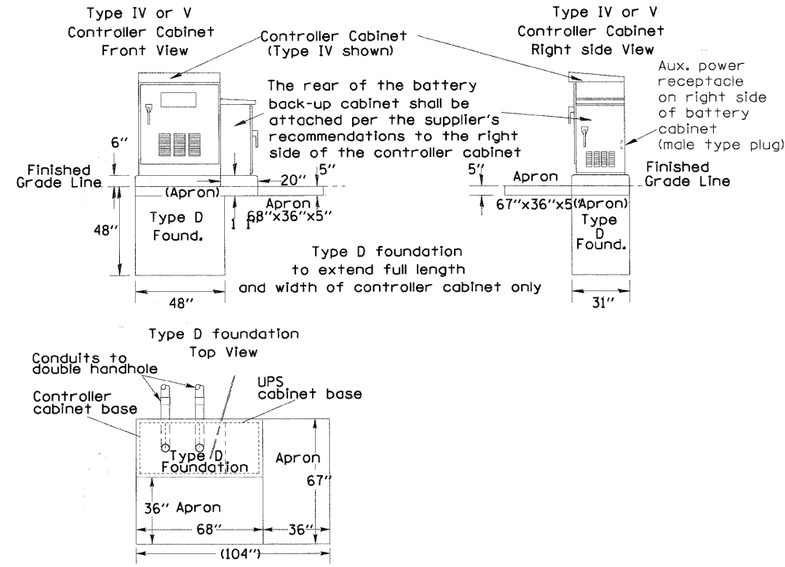
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	108
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



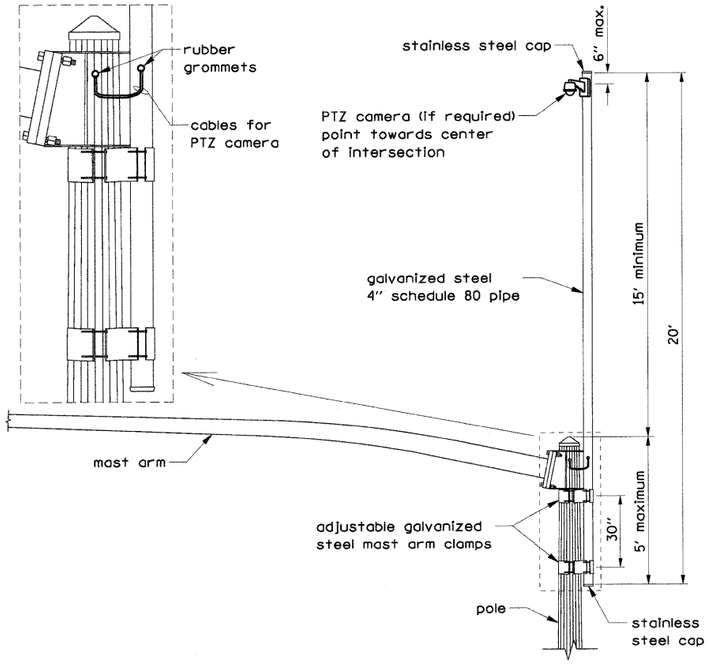
VIDEO DETECTION CAMERA(S) AND PTZ CAMERA MOUNTING DETAIL
(NOT TO SCALE)



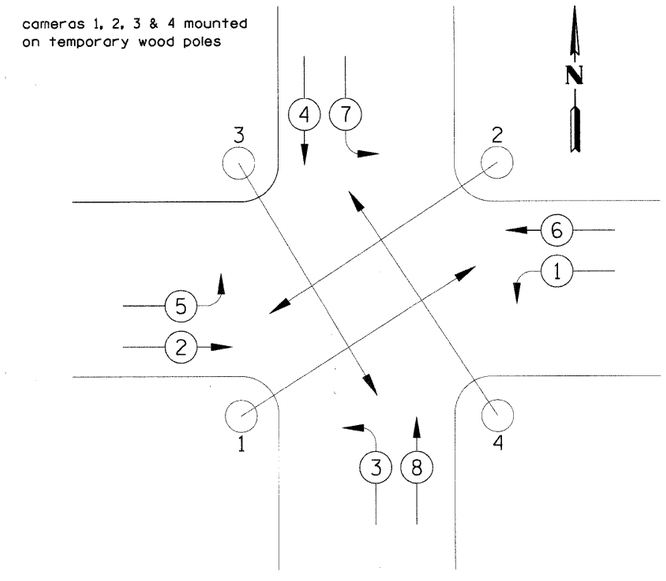
VIDEO DETECTION CAMERA MOUNTING DETAIL FOR TEMPORARY TRAFFIC SIGNALS
(NOT TO SCALE)



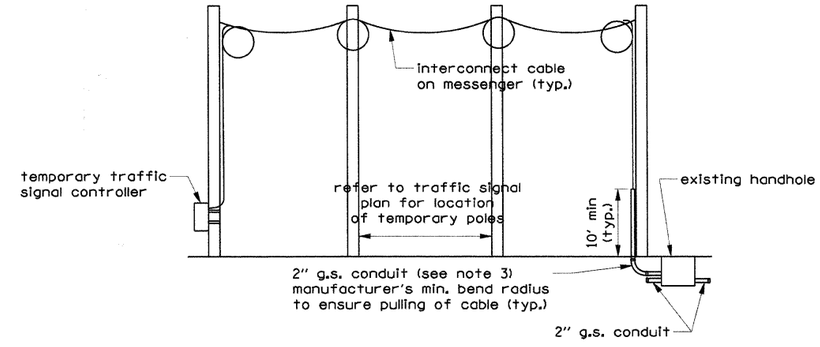
UNINTERRUPTABLE POWER SUPPLY (UPS) CABINET INSTALLATION DETAIL
(NOT TO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL FOR NON-COMBINATION MAST ARMS
(NOT TO SCALE)



VIDEO DETECTION CAMERA ASSIGNMENT FOR TEMPORARY TRAFFIC SIGNALS
(NOT TO SCALE)



1) Transfer of existing to temporary interconnect cable and temporary to proposed interconnect cable must be completed in one working day during non-peak hours or as directed by the Engineer.

2) The existing interconnect cable shall be removed after the proposed interconnect is turned on.

3) The 2" conduit used for the temporary interconnect cable shall be removed to below the ground level and capped at the time the temporary traffic signal is removed. The conduit shall be incidental to the cost of the Temporary Traffic Signal Installation.

4) The Contractor must notify the County Traffic Engineer a minimum of seven working days prior to the start of any work on the traffic signal interconnect system.

AERIALLY SUPPORTED INTERCONNECT CABLE
(NOT TO SCALE)

REVISIONS	
NAME	DATE
UPS SCHEMATIC REVISED	2/1/07

LakeCounty
Division of Transportation

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: N.T.S. DESIGNED BY: JPS
DATE: 05/20/05 CHECKED BY: ANK

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	109
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

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CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

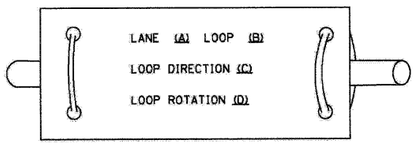
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

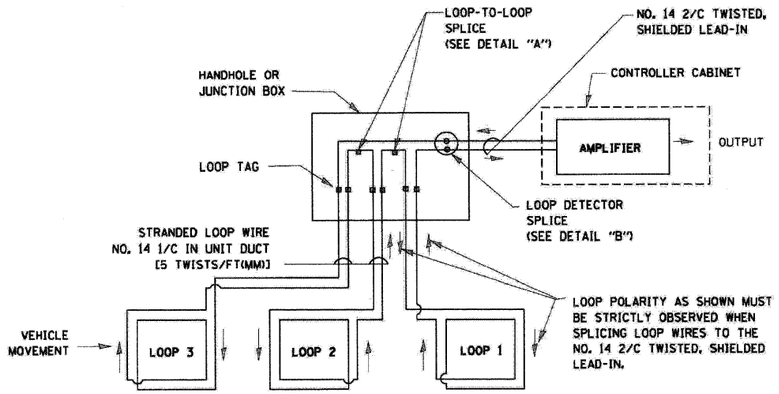


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

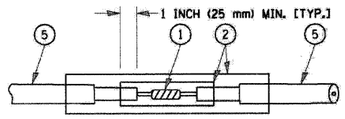
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

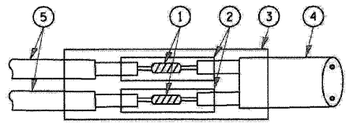


DETECTOR LOOP WIRING SCHEMATIC

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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE

DATE: 2/15/2006

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

TS05

REVISION DATE: 01/01/02

PLOT DATE = 2/15/2006
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PLOT SCALE = 50.0000 '/ IN.
USER NAME = sanglemobt

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		DRAWN - SJP	REVISED -	
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty Division of Transportation

I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. N/A | TO STA. N/A

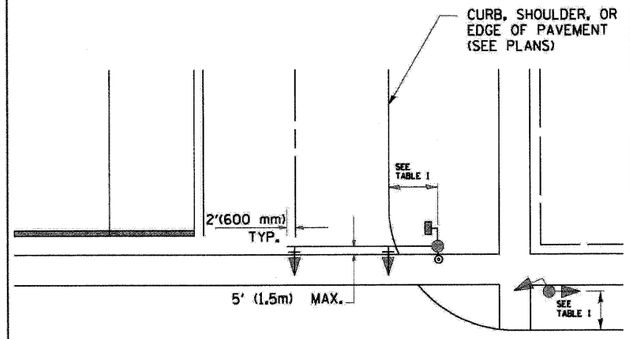
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	110
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO.

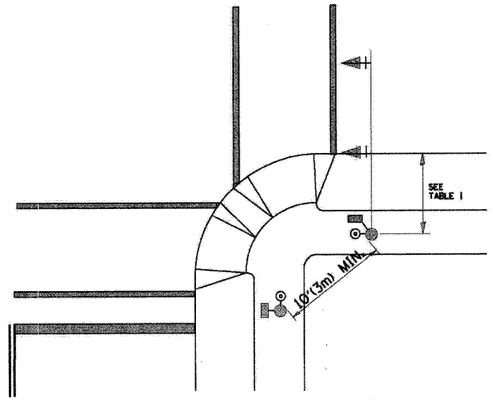
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

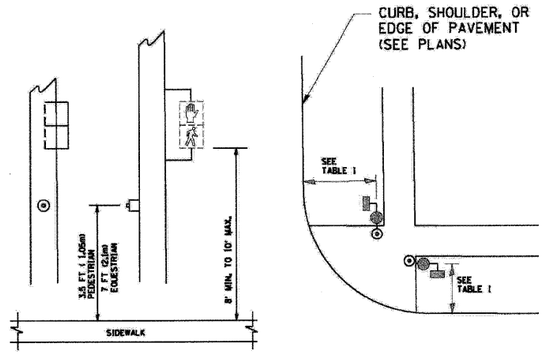


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS NAME	DATE
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE
DATE: 2/15/2006

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

TS05

REVISION DATE: 01/01/02

PLOT DATE = 2/15/2006
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USER NAME = Steve Prange	DESIGNED - SJP	REVISED -	
	DRAWN - SJP	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty Division of Transportation

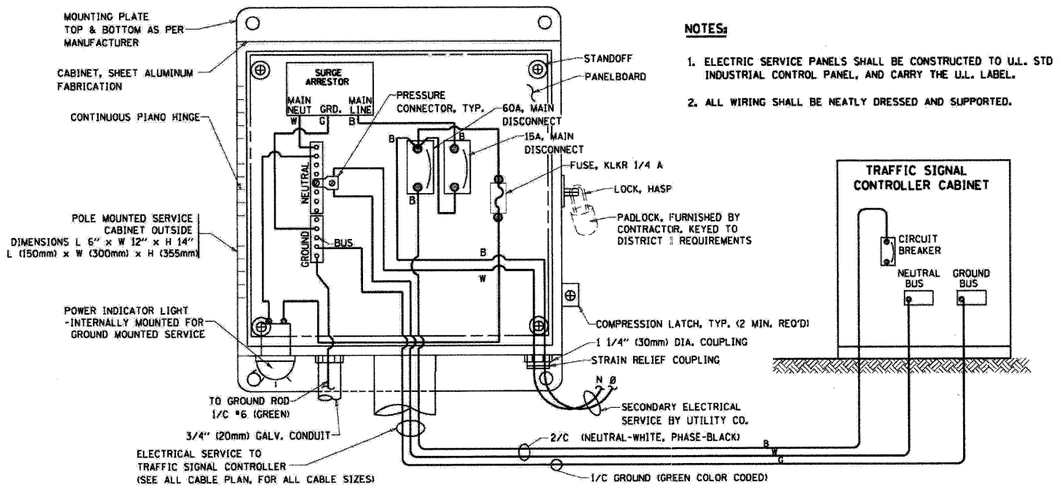
I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	111
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

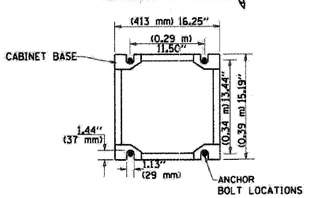
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

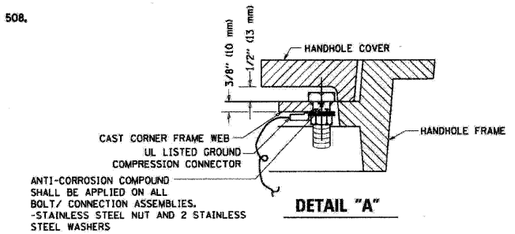
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

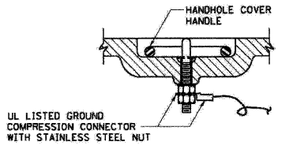


CABINET – BASE BOLT PATTERN

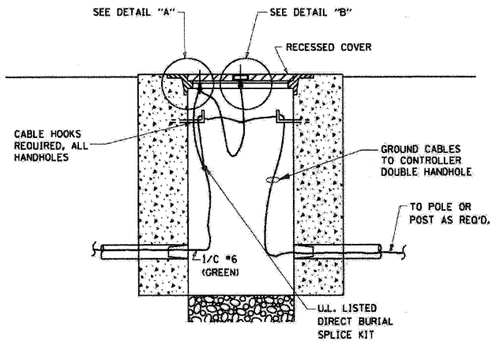
(NOT TO SCALE)



DETAIL "A"

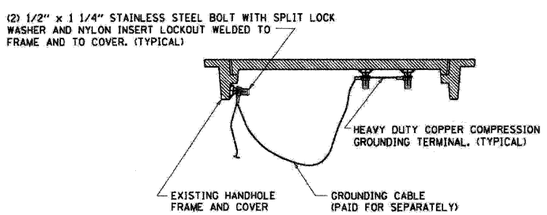


DETAIL "B"



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



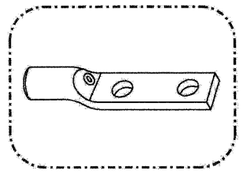
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



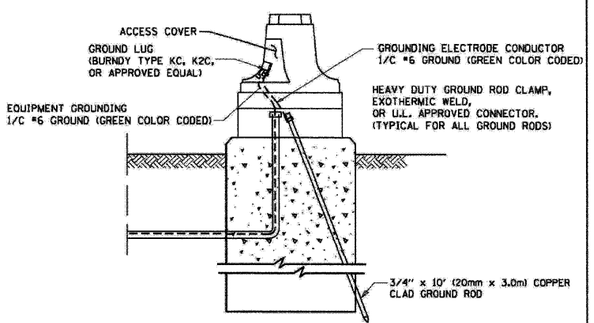
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST-GROUNDING DETAIL

(NOT TO SCALE)

REVISIONS	
NAME	DATE
CADD	5/30/00
CADD	3/15/01
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE
DATE: 2/15/2006

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

TS05

REVISION DATE: 01/01/02

PLOT DATE = 2/15/2006
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PLOT SCALE = 0.8888 ' / IN.
USER NAME = geglonobt

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USER NAME = Steve Prange	DESIGNED - SJP	REVISED -	
	DRAWN - SJP	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

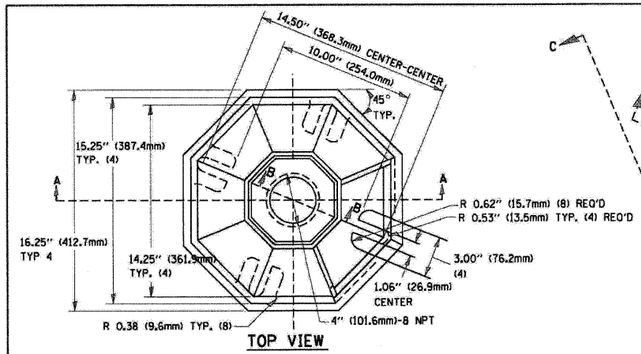
I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. N/A | TO STA. N/A

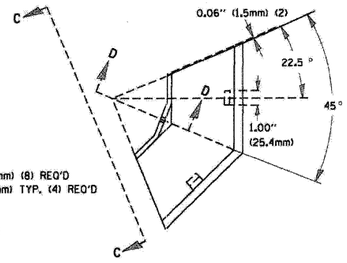
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	112
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

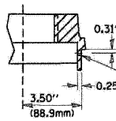
CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

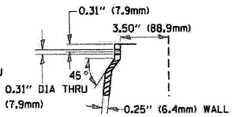


TOP VIEW

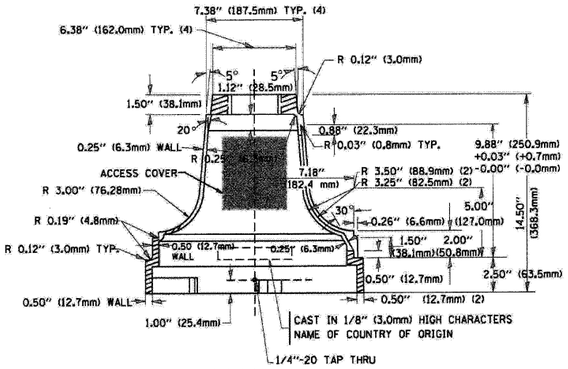




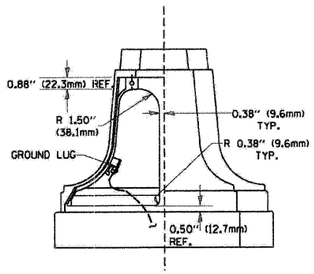
SECTION B-B



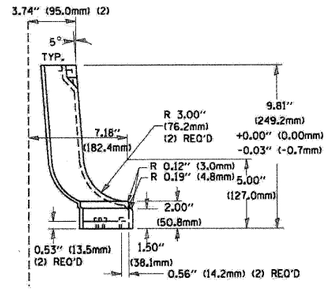
SECTION D-D



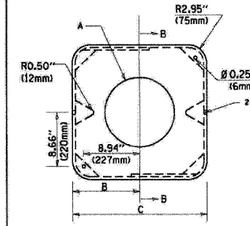
SECTION A-A

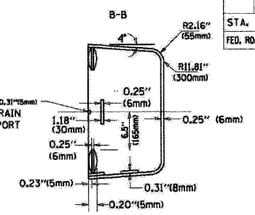


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



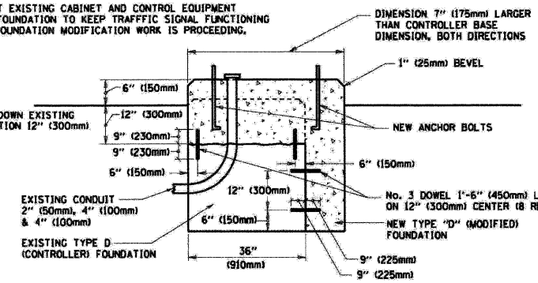


MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	Ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

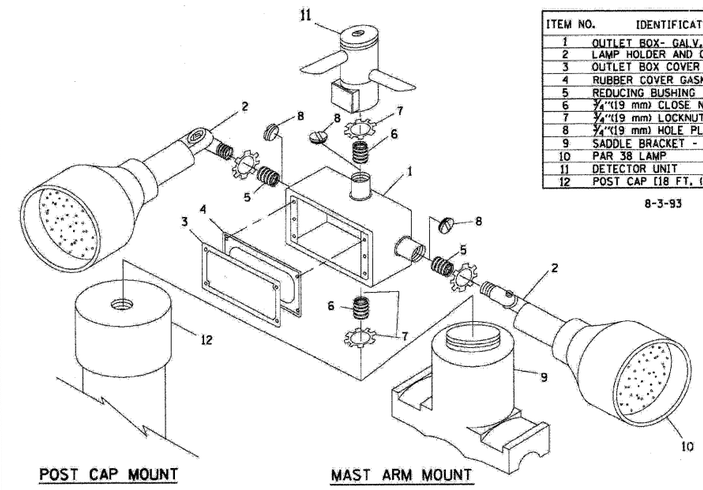
SHROUD DETAIL

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

8-3-93

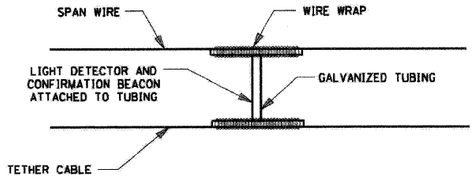
NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ¾"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

POST CAP MOUNT

MAST ARM MOUNT

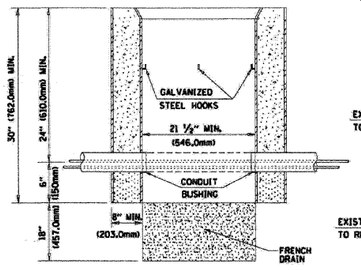
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



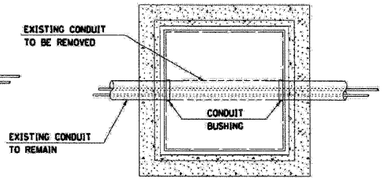
LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



ELEVATION



PLAN

DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE
DATE: 2/15/2006

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 4 OF 4

TS05

REVISION DATE: 01/01/02

PLOT DATE = 2/15/2006
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	DRAWN - SJP	REVISED -
PLOT SCALE = 20.0000 '/ IN.	CHECKED - KDN	REVISED -
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	113
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

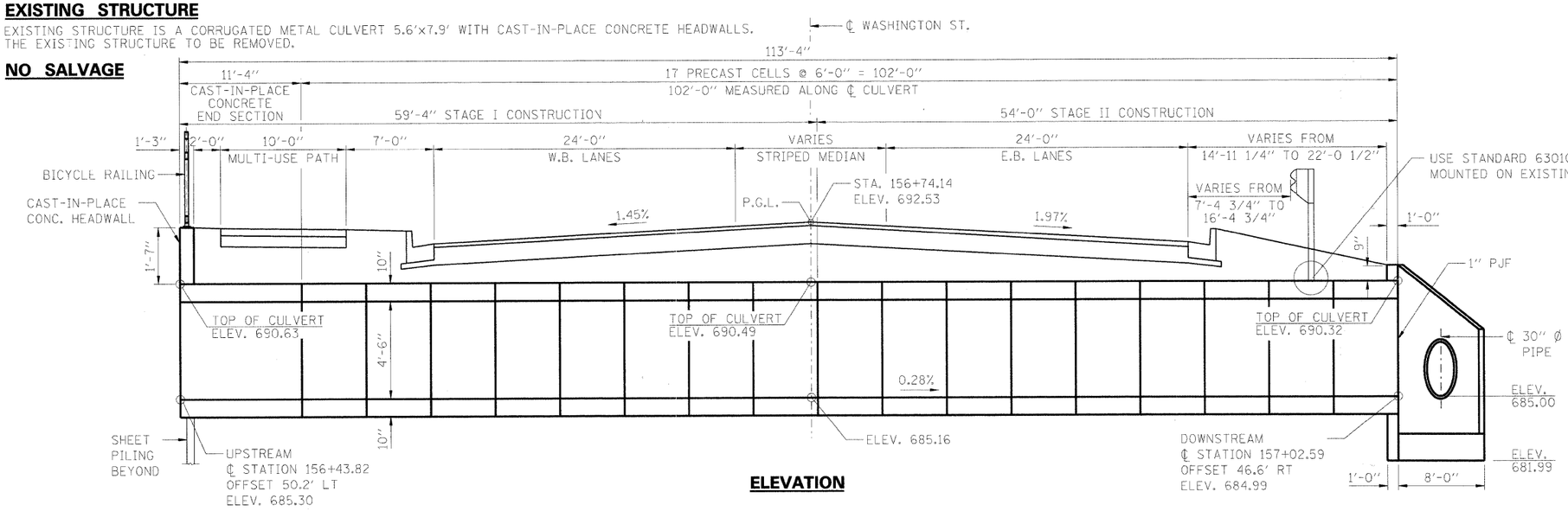
PROPOSED STRUCTURE

THE PROPOSED STRUCTURE IS A SINGLE BARREL PRECAST CONCRETE 10'x4.5' CULVERT WITH CAST-IN-PLACE CONCRETE END SECTIONS. THE NORTH END WINGWALLS ARE SHEET PILE RETAINING WALLS WITH CAST-IN-PLACE CONCRETE CAP. THE WINGWALL AT THE SOUTH END IS A CAST-IN-PLACE CONCRETE T-WALL THAT ENDS AT AN EXISTING GABION WALL. THE PROPOSED STRUCTURE TO BE CONSTRUCTED IN TWO STAGES TO MAINTAIN TRAFFIC ON WASHINGTON ST.

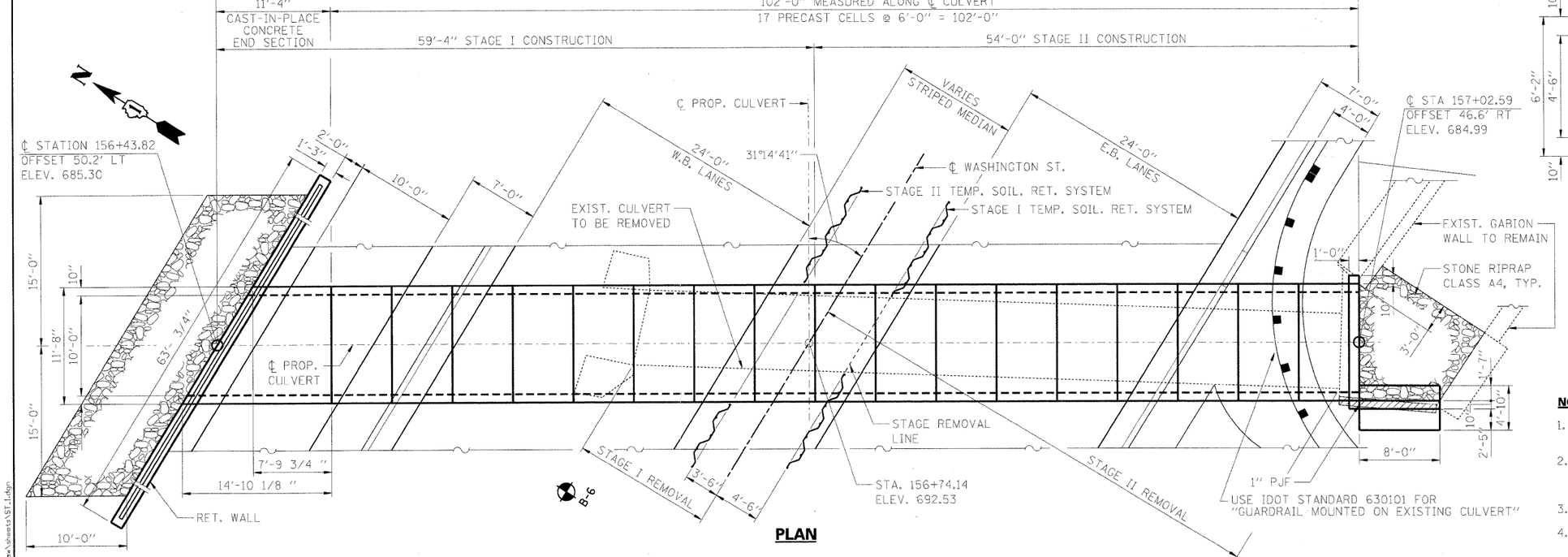
EXISTING STRUCTURE

EXISTING STRUCTURE IS A CORRUGATED METAL CULVERT 5.6'x7.9' WITH CAST-IN-PLACE CONCRETE HEADWALLS. THE EXISTING STRUCTURE TO BE REMOVED.

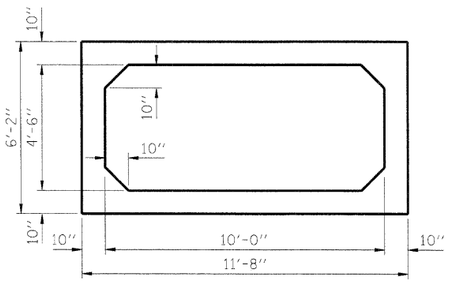
NO SALVAGE



ELEVATION



PLAN



SECTION THRU PRECAST BARREL

DESIGN SPECIFICATIONS

AASHTO STANDARD SPECIFICATIONS
FOR HIGHWAY BRIDGES, 17TH EDITION, 2002

LOADING HS 20-44

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (REINFORCEMENT)

PRECAST UNITS

f'c = 5,000 psi
fy = 65,000 psi (WELDED WIRE FABRIC)

SEISMIC DATA

SEISMIC PERFORMANCE CATEGORY (SPC) = A
BEDROCK ACCELERATION COEFFICIENT (A) = 0.04
SITE COEFFICIENT (S) = 1.5

NOTES:

1. THE PRECAST CULVERT SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO M273.
2. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF THE AASHTO M31, M42 OR M53 GRADE 60.
3. PRECAST END SECTIONS WILL NOT BE ALLOWED.
4. SHEET PILES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M202.

FILE NAME = I:\Lakecco\08224601\dgn\sheets\ST1.dgn

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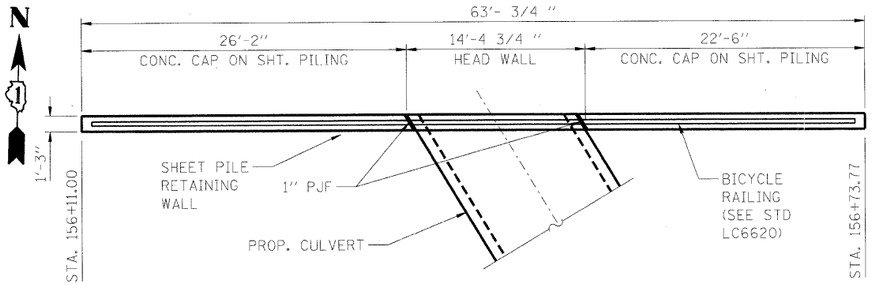
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PLOT SCALE = 6.2000 ' / IN.	CHECKED - KDN	REVISED -
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

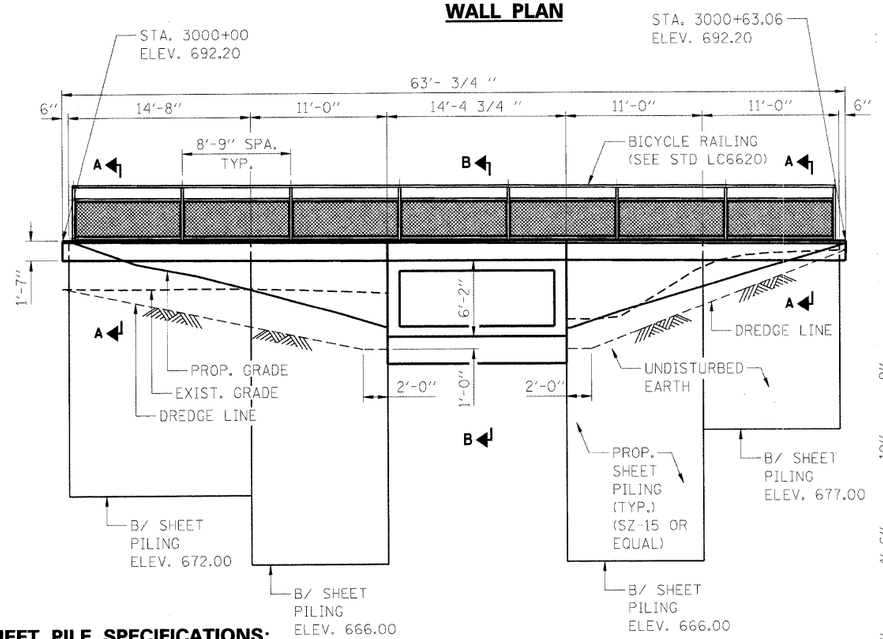
PROPOSED BOX CULVERT DETAILS
STATION 156+74

SCALE: N/A | SHEET NO. 1 OF 2 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	114
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



WALL PLAN



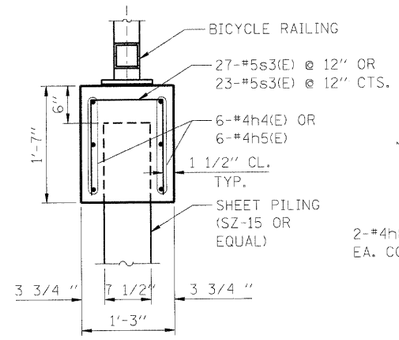
ELEVATION

SHEET PILE SPECIFICATIONS:

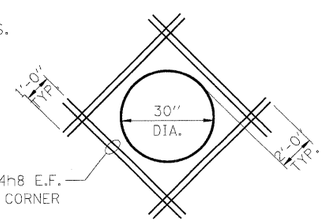
fy = 50,000 psi (AASHTO M202 GRADE 50)
$S_{EFFECTIVE}$ = 6.6 IN.³/FT. (SEE SPECIAL PROVISIONS)

NOTE:

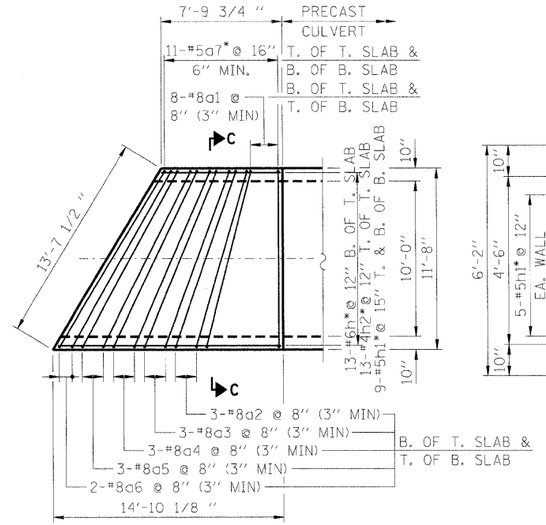
NO EXCAVATION ALLOWED BELOW THE DREDGE LINE WITHOUT THE ENGINEER'S PERMISSION.



SECTION A–A

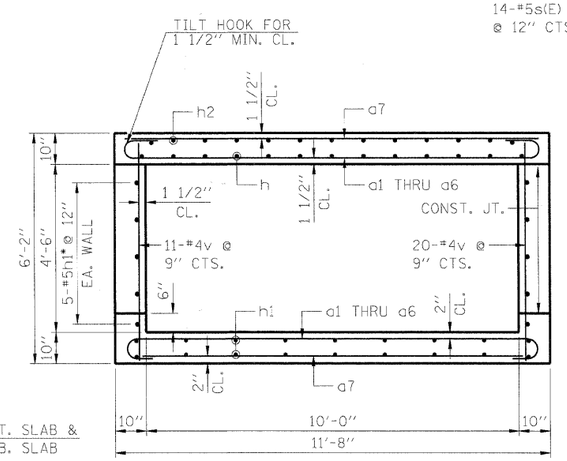


TYPICAL ADDITIONAL REINFORCEMENT AROUND PIPE PENETRATIONS

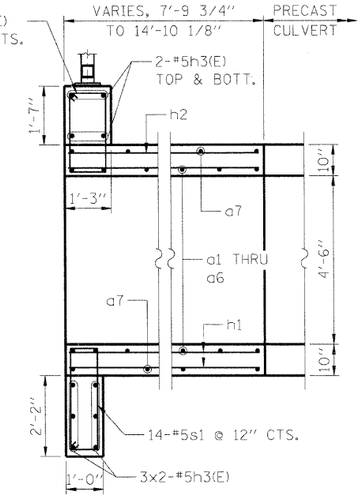


CAST-IN-PLACE CONCRETE END SECTION PLAN

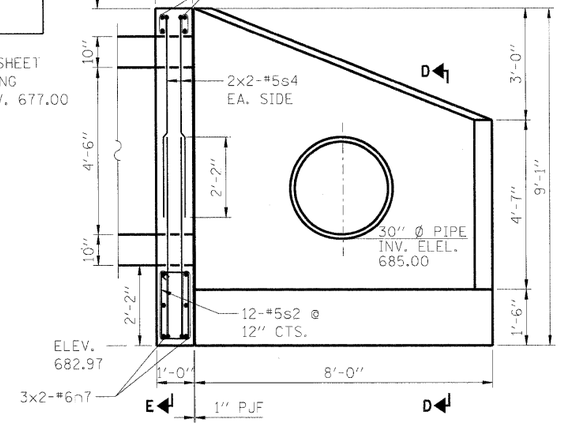
(HEADWALL ABOVE NOT SHOWN FOR CLARITY)
* CUT IN FIELD TO FIT



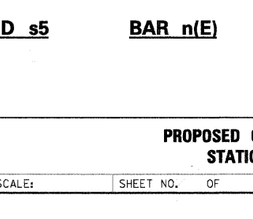
SECTION C–C



SECTION B–B

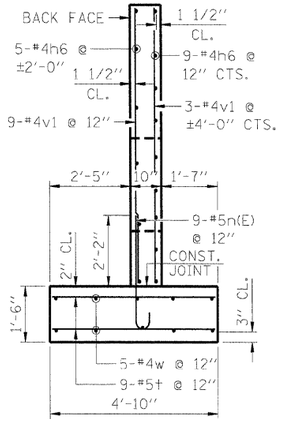


WINGWALL ELEVATION

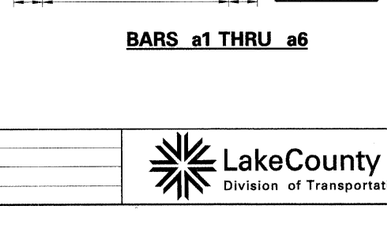


SECTION E–E

(OPP. HAND SIMILAR)

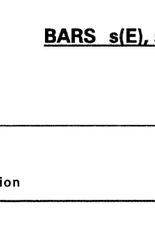


SECTION D–D



BAR	A
a1	11'-4"
a2	11'-7"
a3	11'-10"
a4	12'-2"
a5	12'-7"
a6	13'-0"

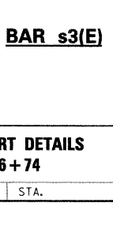
BARS a1 THRU a6



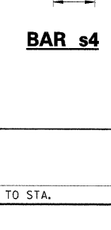
BAR	A	B
s	11"	2'-1"
s1	8"	2'-8"
s2	8"	1'-10"
s5	6"	8"

BARS s(E), s1, s2 AND s5

BAR n(E)



BAR s3(E)



BAR s4

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a1	16	#8	13'-2"	
a2	6	#8	13'-5"	
a3	6	#8	13'-8"	
a4	6	#8	14'-0"	
a5	6	#8	14'-5"	
a6	4	#8	14'-10"	
a7	22	#5	13'-3"	
h	13	#6	14'-6"	
h1	28	#5	14'-6"	
h2	13	#4	14'-6"	
h3(E)	10	#5	13'-3"	
h4(E)	6	#4	25'-10"	
h5(E)	6	#4	22'-2"	
h6	14	#4	7'-7"	
h7	10	#6	13'-0"	
h8	16	#4	6'-6"	
n(E)	9	#5	4'-0"	
s(E)	14	#5	6'-11"	
s1	14	#5	7'-7"	
s2	12	#5	5'-11"	
s3(E)	50	#5	3'-8"	
s4	8	#5	7'-7"	
s5	14	#5	3'-3"	
†	18	#5	4'-6"	
v	31	#4	5'-10"	
v1	12	#4	7'-4"	
v2	8	#5	5'-5"	
w	10	#4	7'-7"	

STRUCTURE EXCAVATION	CU. YD.	577
CONCRETE STRUCTURES	CU. YD.	11.0
PROTECTIVE COAT	SQ. YD.	10.3
REINFORCEMENT BARS	POUND	3,740
REINFORCEMENT BARS, EPOXY COATED	POUND	660
BICYCLE RAILING	FOOT	61.25
CONCRETE BOX CULVERTS	CU. YD.	11.3
PRECAST CONCRETE BOX CULVERT 10'x4.5' (M273)	FOOT	102
PERMANENT STEEL SHEET PILING	SQ. FT.	1,016

NOTES:

1. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
2. WORK THIS SHEET WITH SHEET 116.

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	DRAWN - PA	REVISED -	
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PLOT DATE = 07/15/09	DATE - 07/15/09	REVISED -	

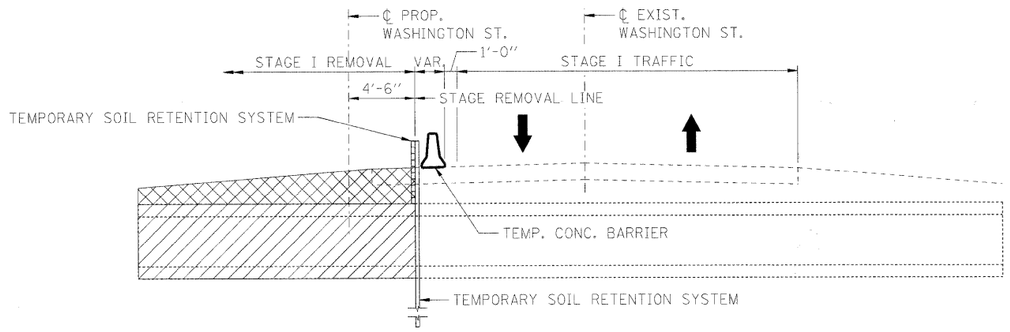
LakeCounty
Division of Transportation

PROPOSED CULVERT DETAILS
STATION 156+74

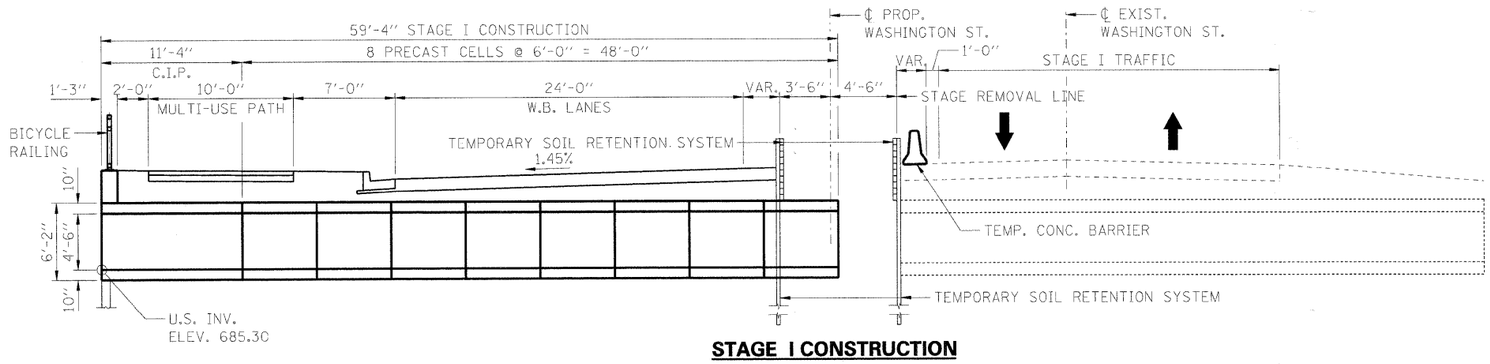
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

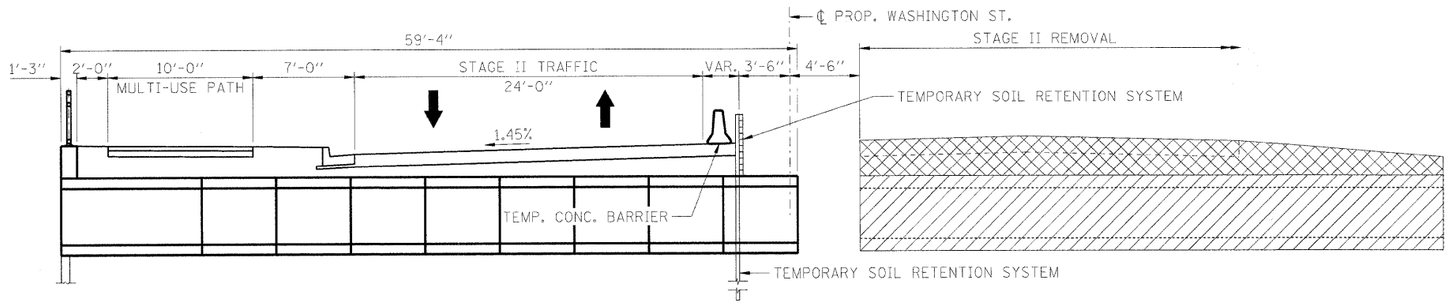
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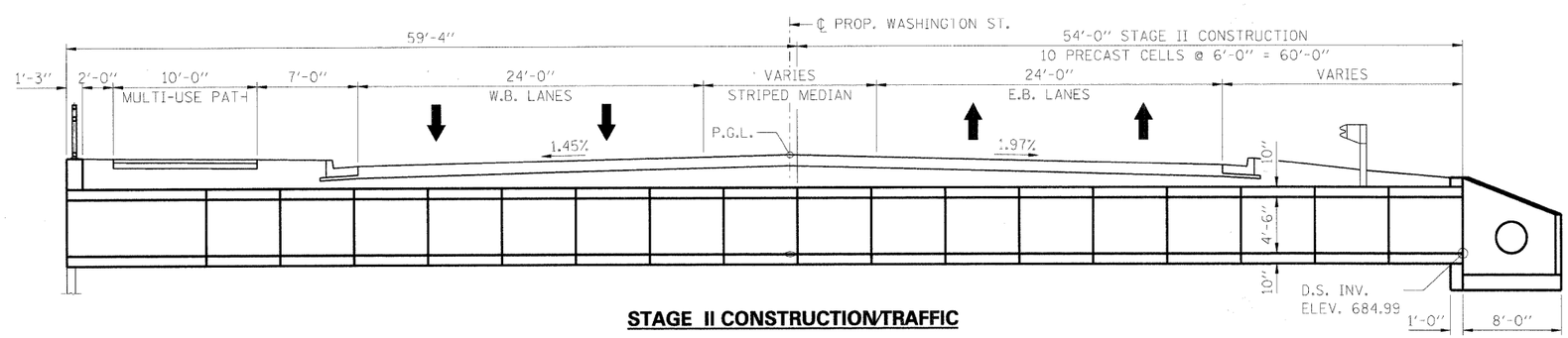
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION/TRAFFIC

LEGEND

PAVEMENT REMOVAL

PIPE CULVERT REMOVAL

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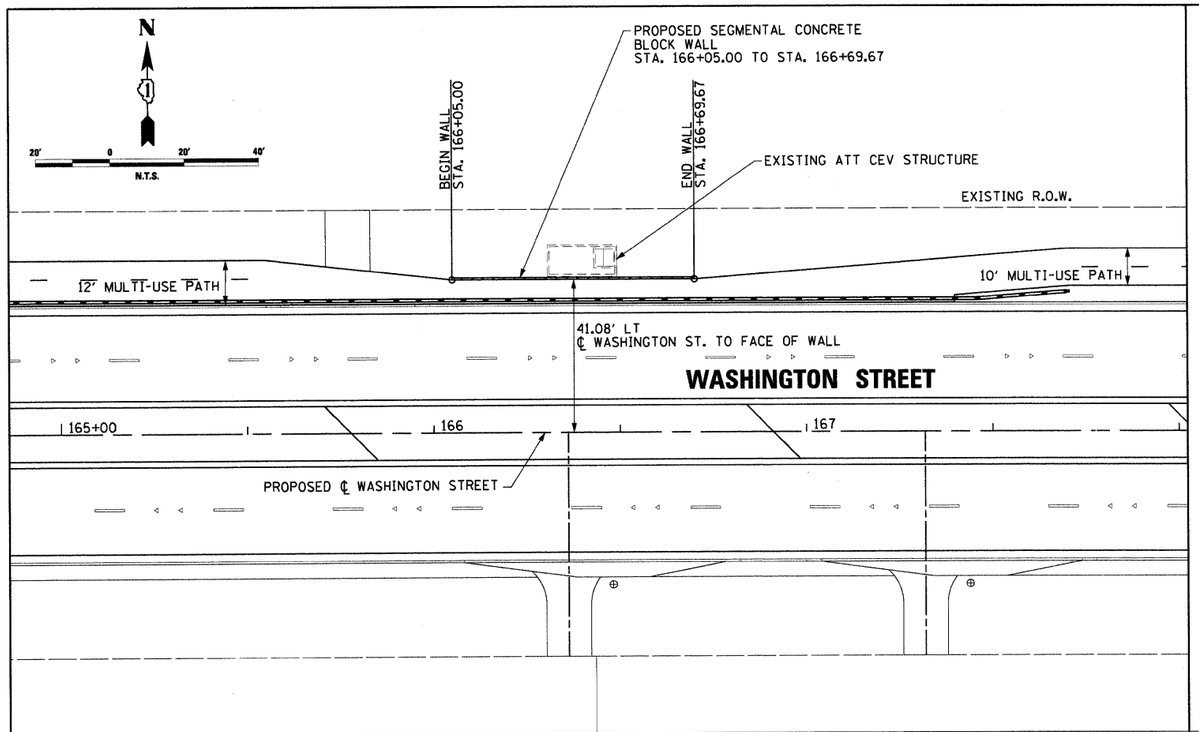
CMT ©Copyright CMT, Inc. CRAWFORD, MURPHY & TILLY, INC. CONSULTING ENGINEERS License No. 184-000613	USER NAME = Steve Prange	DESIGNED - AT1	REVISED -
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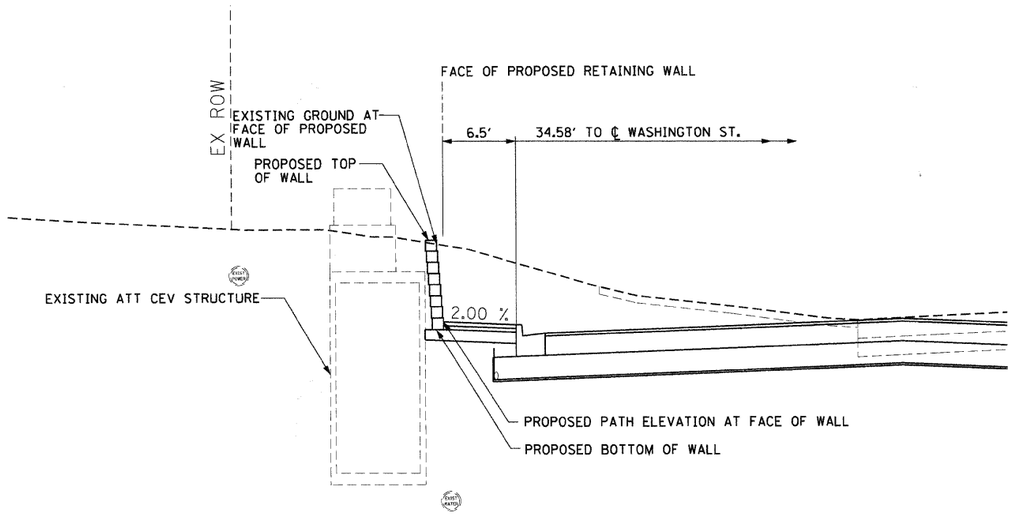
LakeCounty Division of Transportation

PROPOSED BOX CULVERT SEQUENCE OF CONSTRUCTION STATION 156+74

SCALE: N/A | SHEET NO. 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



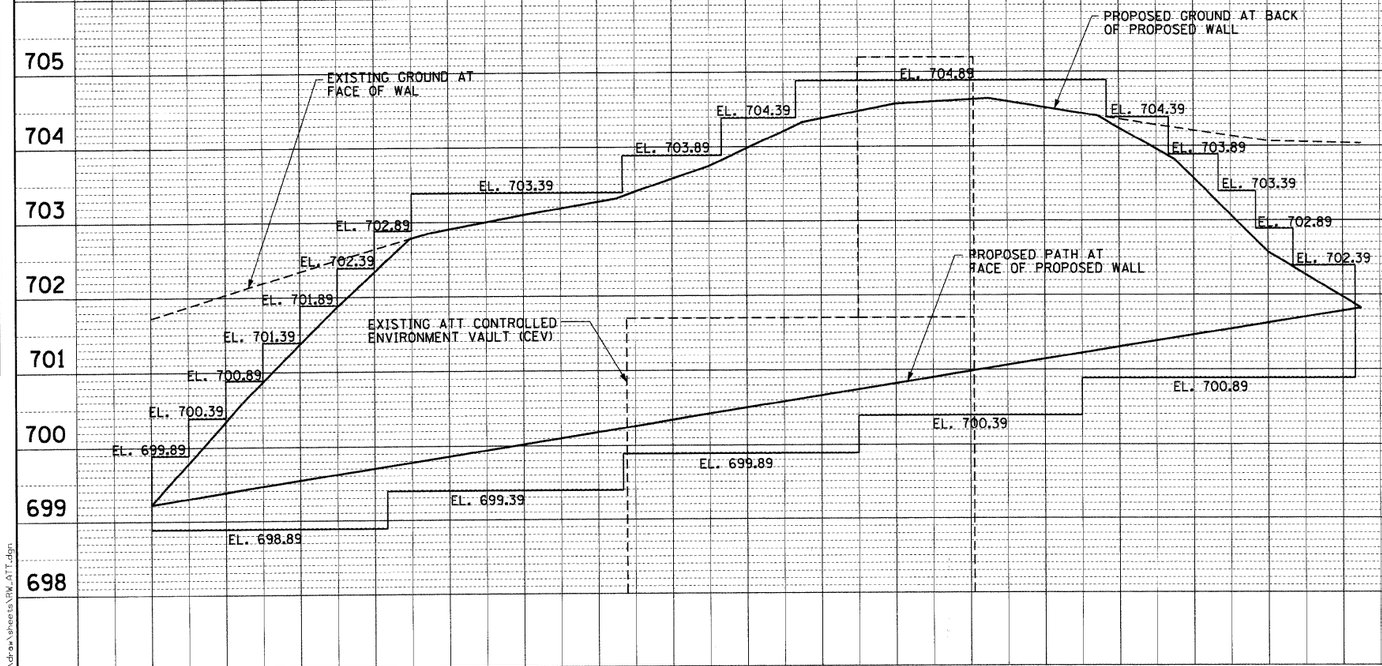


BILL OF MATERIAL

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
X0322923	SEGMENTAL CONCRETE BLOCK WALL	SQ FT	229

NOTE:

LOCATION OF ATT CONTROLLED ENVIRONMENT VAULT (CEV) IS ESTIMATED BASED ON ATT SHOP DRAWINGS. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF ATT CEV STRUCTURE.



STATION	EXISTING GROUND ELEVATION	PROPOSED PATH ELEVATION	PROPOSED GROUND ELEVATION	TOP OF WALL ELEVATION	BOTTOM OF WALL ELEVATION
166+05	701.75	699.22	699.22	699.89	698.89
166+10	702.15	699.42	700.62	700.89	698.89
166+15	702.53	699.62	701.87	701.89 702.39	698.89
166+20	702.89	699.82	703.03	703.39	699.39
166+25	703.13	700.02	703.13	703.39	699.39
166+30	703.35	700.22	703.35	703.39	699.39
166+35	703.79	700.42	703.79	703.89	699.89
166+40	704.40	700.62	704.40	704.89	699.89
166+45	704.66	700.82	704.66	704.89	700.39
166+50	704.74	701.02	704.74	704.89	700.39
166+55	704.53	701.22	704.53	704.89	700.39 700.89
166+60	704.35	701.42	703.82	703.89	700.89
166+65	704.16	701.62	702.57	702.89	700.89
166+69.67	704.12	701.82	701.82	702.39	700.89

PLAN — SURVEYED / PLOTTED / GRADES CHECKED / R.O.W. CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / R.O.W. CHECKED / STRUCTURE NOTATIONS CHKD / NOTE BOOK / NO. / BY / DATE

FILE NAME = I:\Lakecon\0822401\dgn\sheets\RW_ATT.dgn

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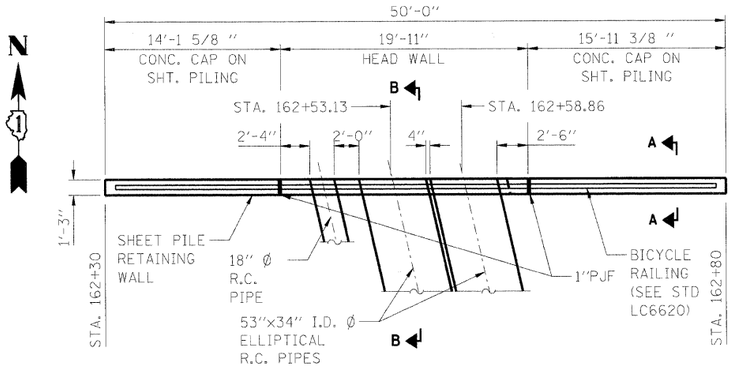
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LakeCounty
Division of Transportation

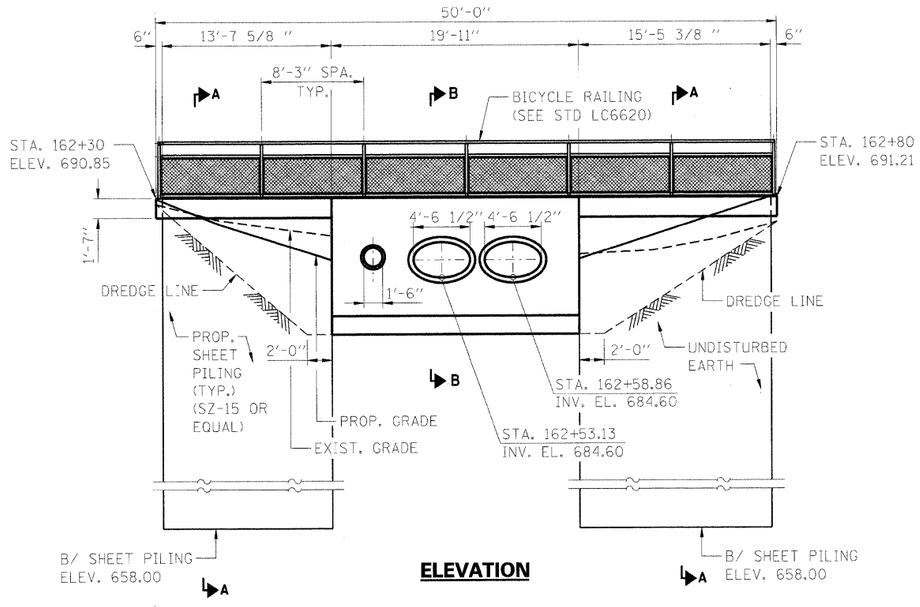
PROPOSED RETAINING WALL #1
STATION 166+05 TO 166+70

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

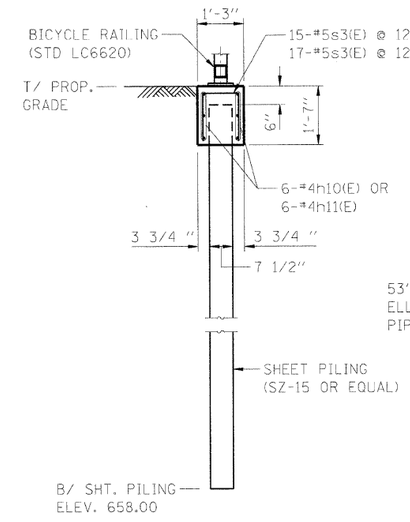
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



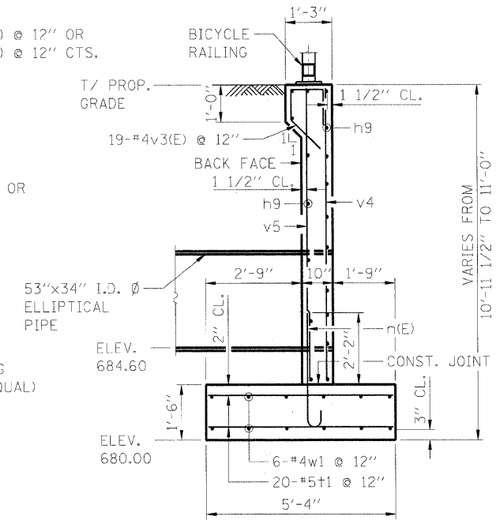
PLAN



ELEVATION



SECTION A–A



SECTION B–B

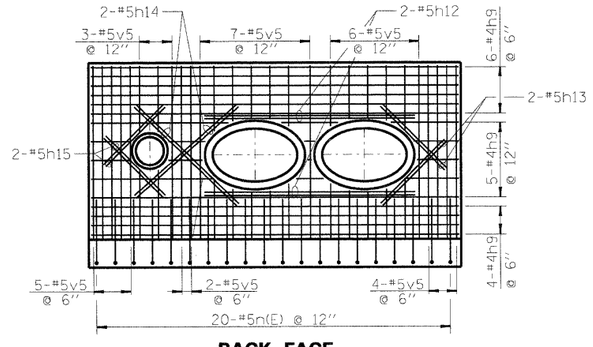
BILL OF MATERIAL

	BAR	NO.	SIZE	LENGTH	SHAPE
*	h9	25	#4	19'-7"	——
	h10(E)	6	#4	13'-10"	——
	h11(E)	6	#4	15'-7"	——
	h12	8	#5	11'-3"	——
	h13	8	#5	5'-0"	——
	h14	8	#5	7'-6"	——
	h15	8	#5	4'-6"	——
	n(E)	20	#5	4'-0"	⊔
	s3(E)	32	#5	3'-8"	⊓
	t1	40	#5	5'-0"	——
	v3(E)	19	#4	3'-5"	⊏
*	v4	19	#4	9'-4"	——
*	v5	27	#5	9'-4"	——
	w1	12	#4	19'-7"	——
	CONCRETE STRUCTURES			CU. YD.	13.3
	PROTECTIVE COAT			SQ. YD.	6.9
	REINFORCEMENT BARS			POUND	1,310
	REINFORCEMENT BARS, EPOXY COATED			POUND	370
	BICYCLE RAILING			FOOT	49.50
	PERMANENT STEEL SHEET PILING			SQ. FT.	945

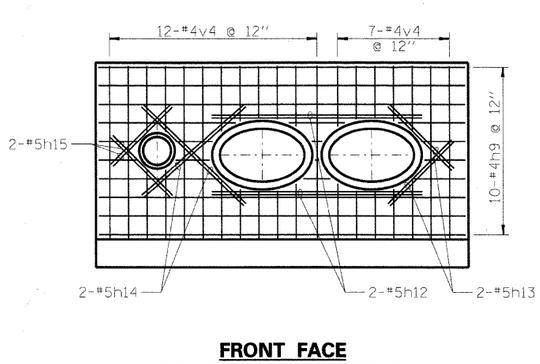
* CUT BARS TO FIT.

NOTES:

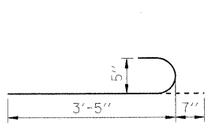
1. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.



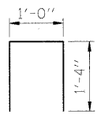
BACK FACE REINFORCEMENT DETAIL



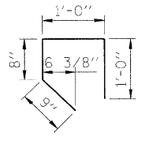
FRONT FACE REINFORCEMENT DETAIL



BAR n(E)



BAR s3(E)



BAR v3(E)

SHEET PILE SPECIFICATIONS:

fy = 50,000 psi (AASHTO M202 GRADE 50)
$S_{EFFECTIVE}$ = 6.6 IN.³/FT. (SEE SPECIAL PROVISIONS)

NOTE:

NO EXCAVATION ALLOWED BELOW THE DREDGE LINE WITHOUT THE ENGINEER'S PERMISSION.

FILE NAME = I:\Lakeco\052240\dgn\sheets\ST_4.dgn

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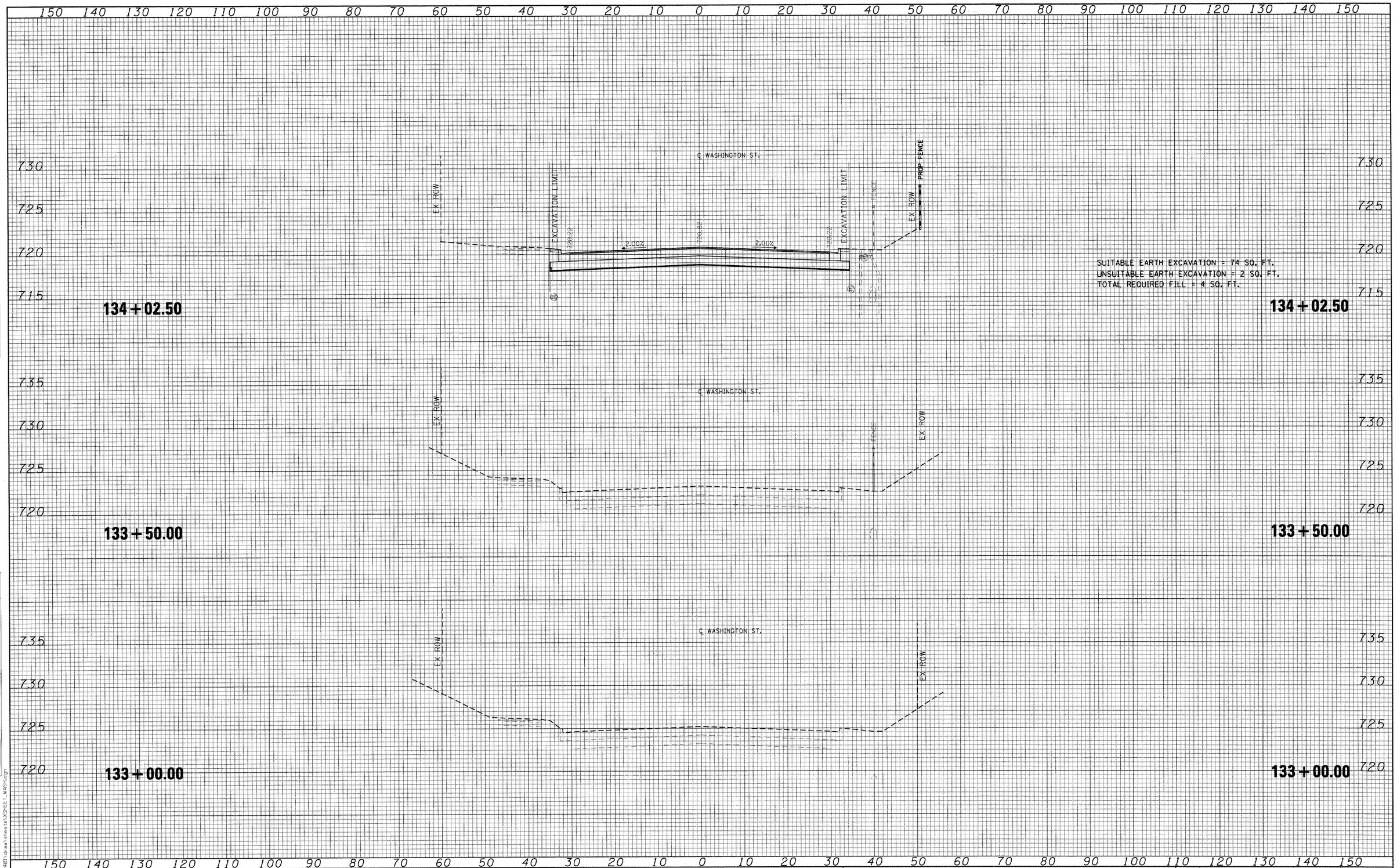
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

PROPOSED RETAINING WALL NO. 2 DETAILS
STATION 162+30 TO 162+80

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	118
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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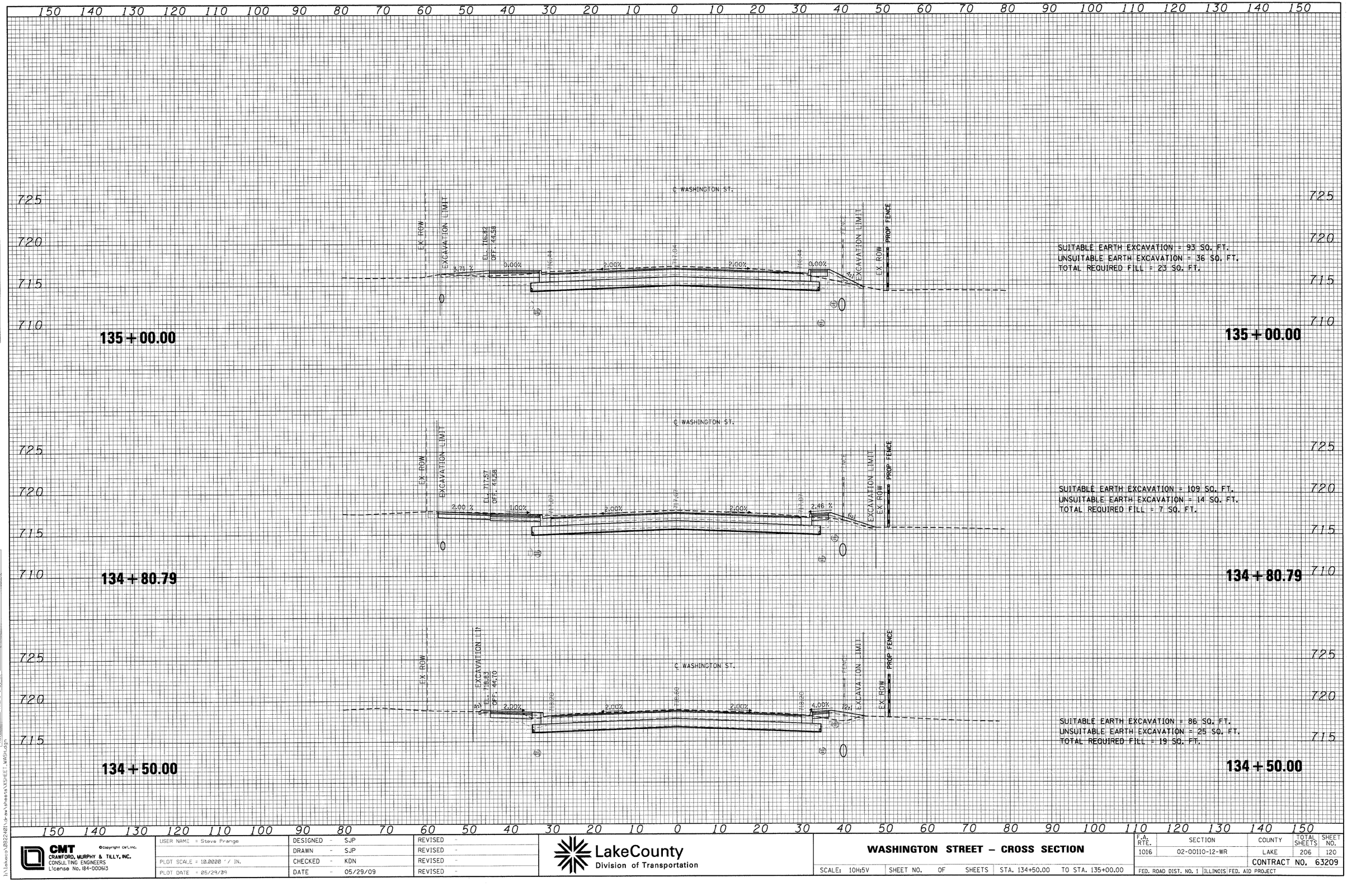
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	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 133+00.00 TO STA. 134+02.50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	119
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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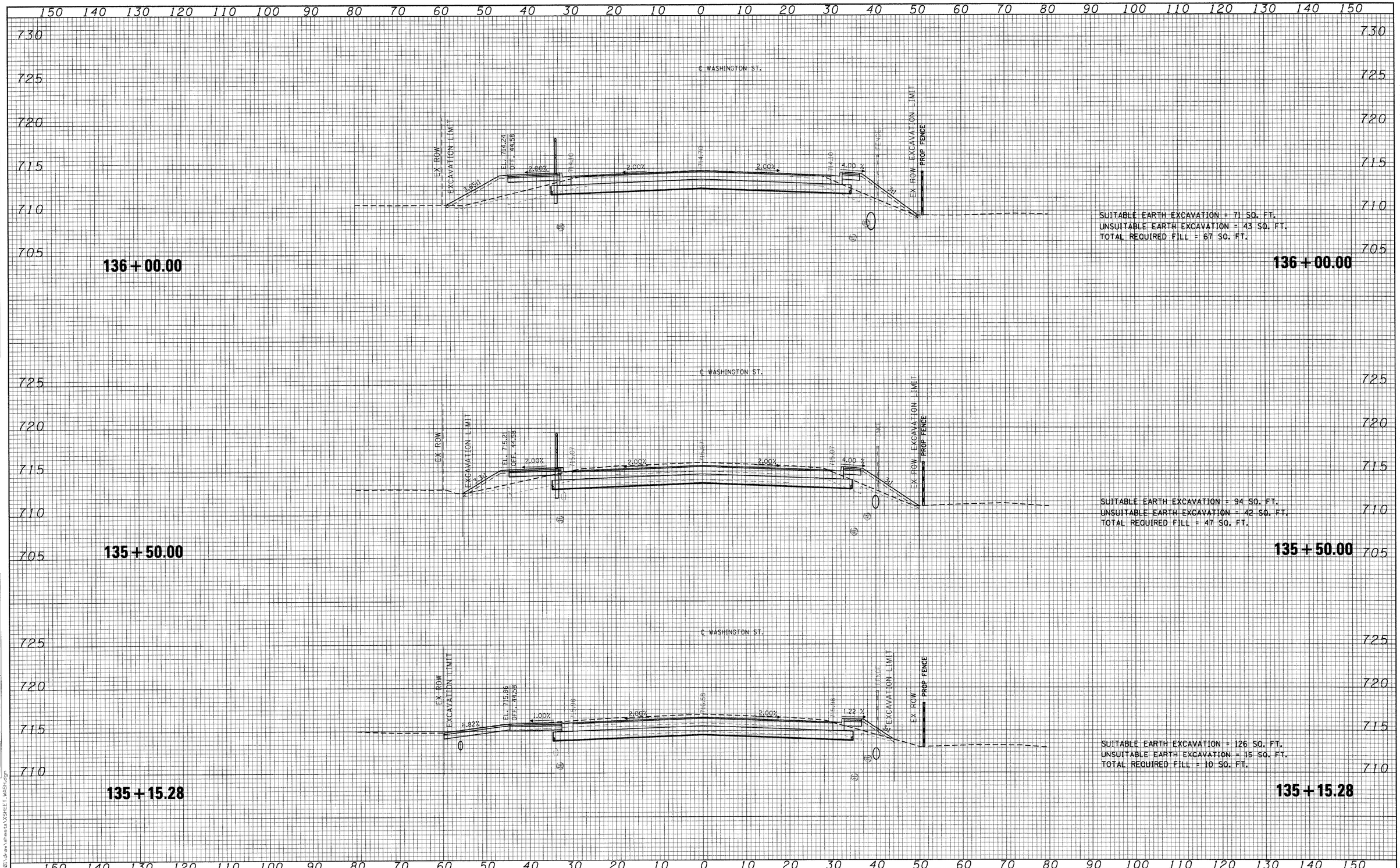
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 134+50.00 TO STA. 135+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	120
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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	DRAWN - SJP	REVISED -	
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

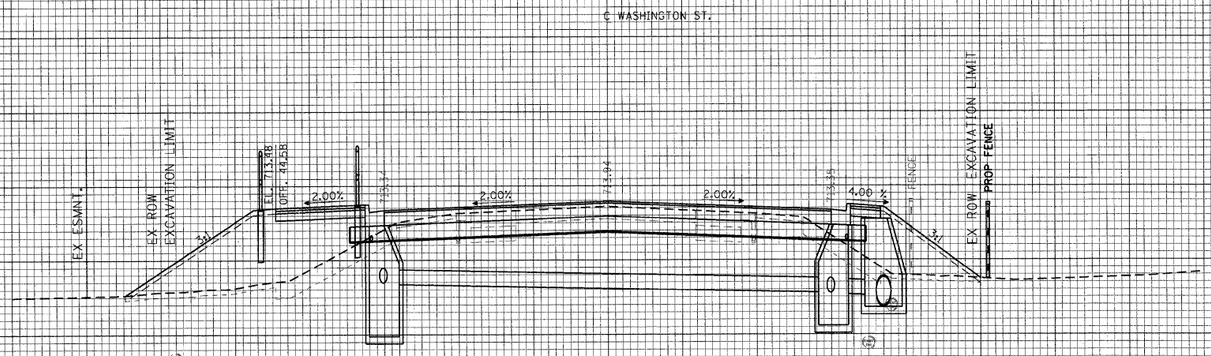
LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 135+15.28 TO STA. 136+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	121
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

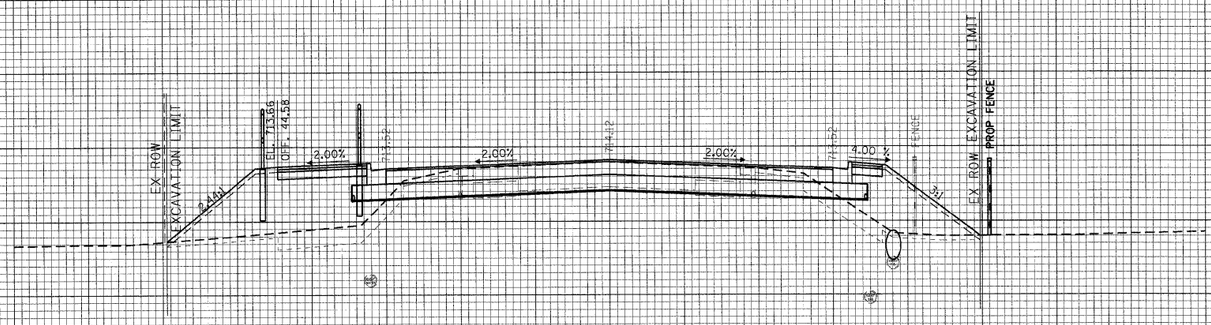


137 + 00.00

SUITABLE EARTH EXCAVATION = 50 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 42 SQ. FT.
TOTAL REQUIRED FILL = 147 SQ. FT.

137 + 00.00

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



136 + 50.00

SUITABLE EARTH EXCAVATION = 60 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 42 SQ. FT.
TOTAL REQUIRED FILL = 148 SQ. FT.

136 + 50.00

FILE NAME = J:\Projects\08224801\draw\sheets\XSHEET WASH.dgn

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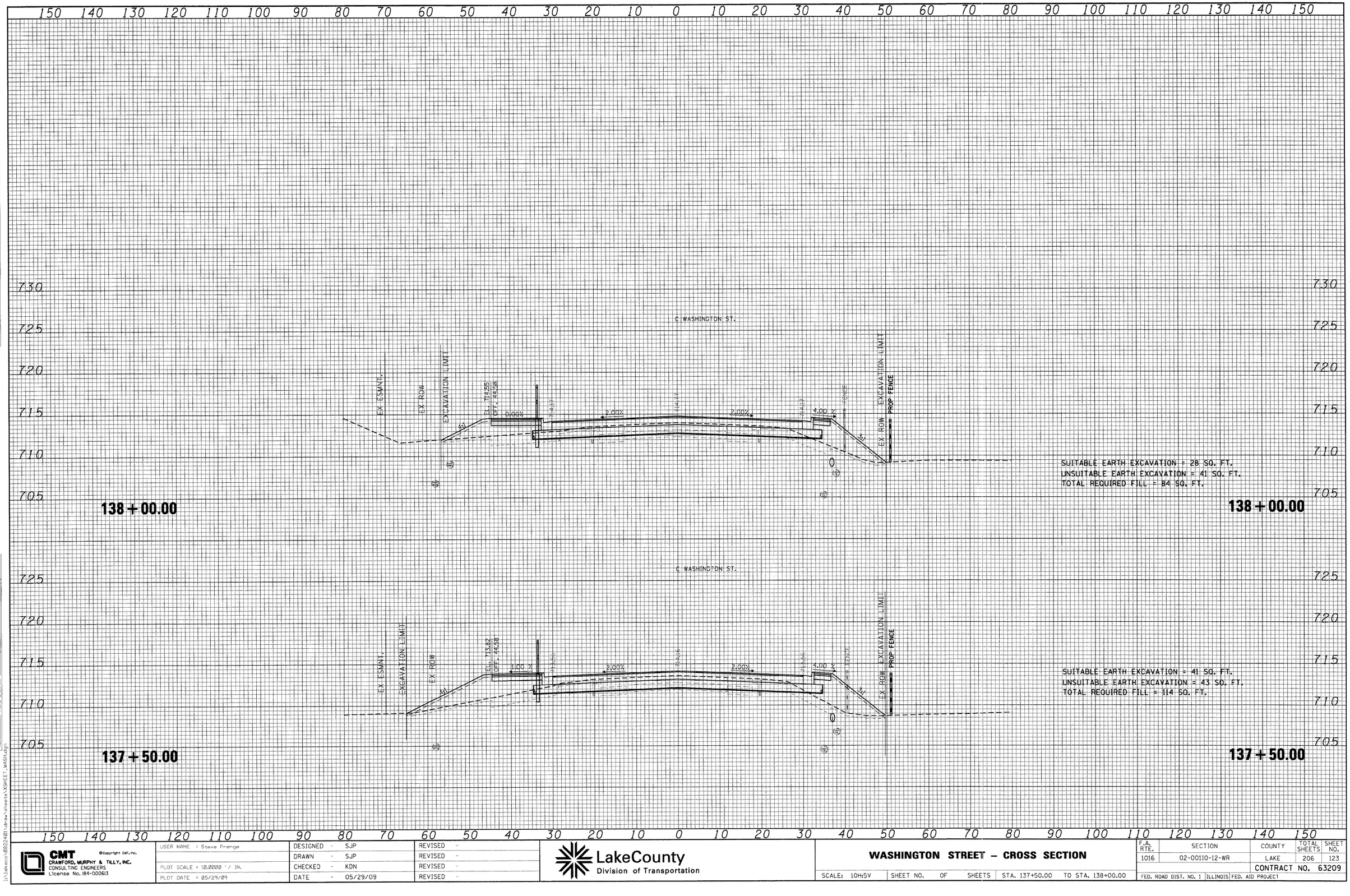
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PLOT SCALE = 10.0000 ' / IN.	CHECKED - KDN	REVISED -
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 136+50.00 TO STA. 137+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	122
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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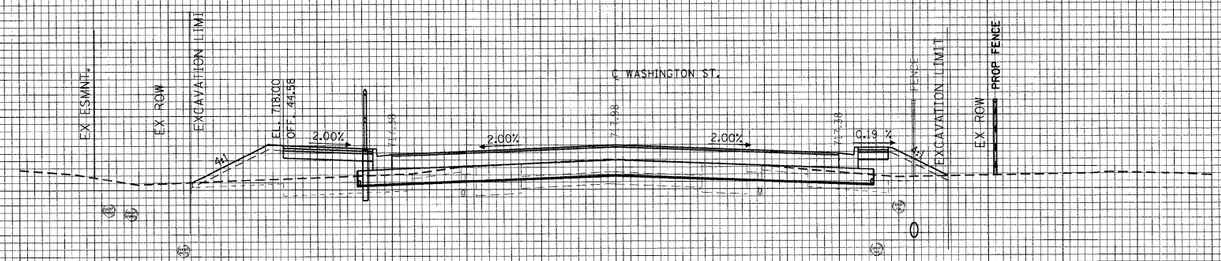
Lake County Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 137+50.00 TO STA. 138+00.00

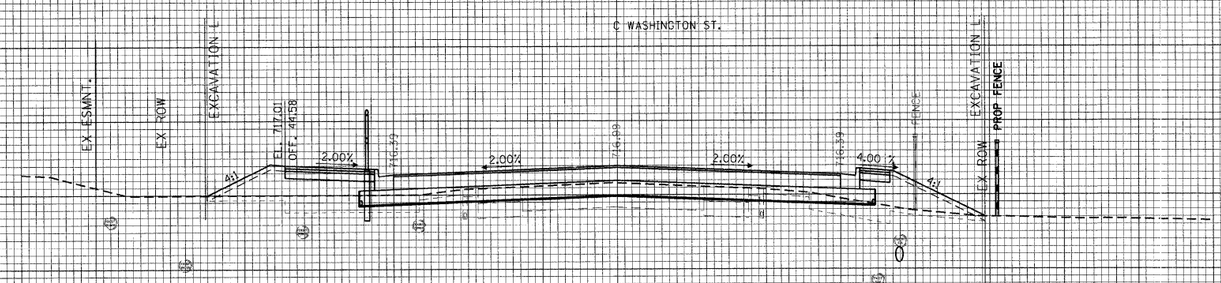
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	123
		CONTRACT NO. 63209		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



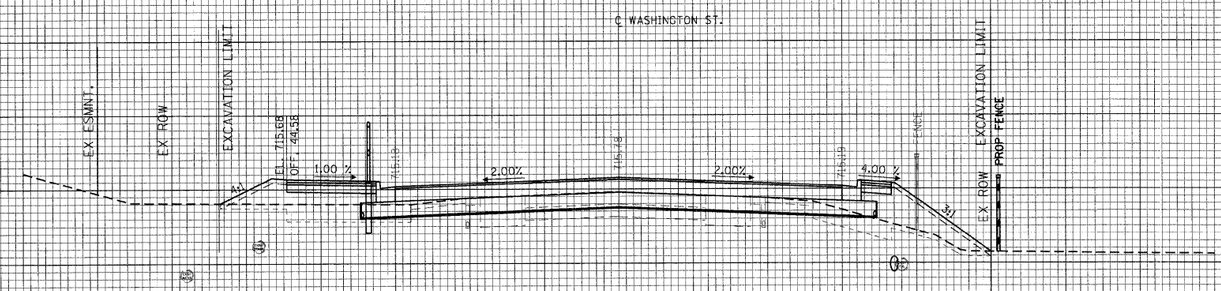
SUITABLE EARTH EXCAVATION = 17 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 41 SQ. FT.
TOTAL REQUIRED FILL = 64 SQ. FT.

139 + 50.00



SUITABLE EARTH EXCAVATION = 10 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 43 SQ. FT.
TOTAL REQUIRED FILL = 76 SQ. FT.

139 + 00.00



SUITABLE EARTH EXCAVATION = 19 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 40 SQ. FT.
TOTAL REQUIRED FILL = 69 SQ. FT.

138 + 50.00

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

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

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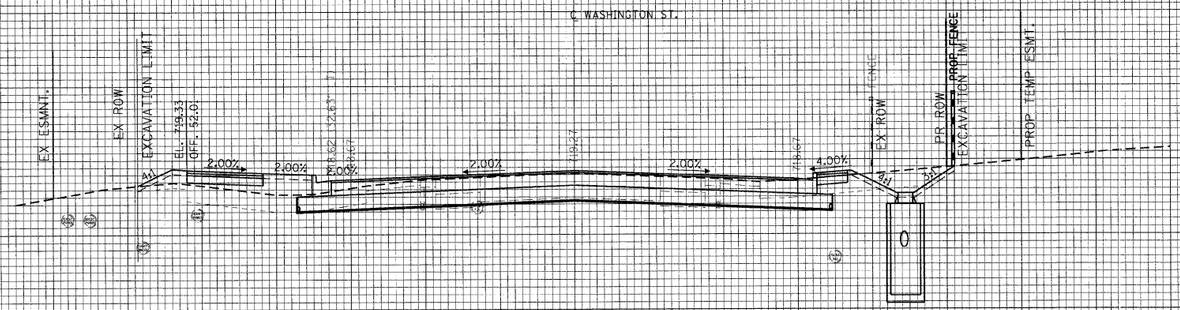
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

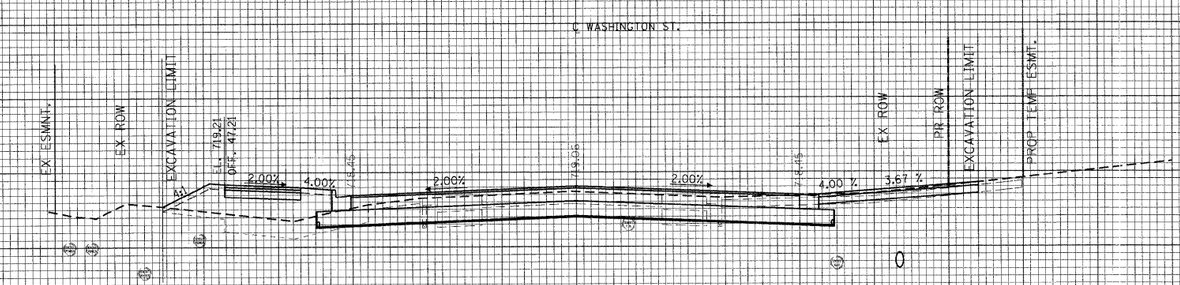
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 138+50.00 TO STA. 139+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	124
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



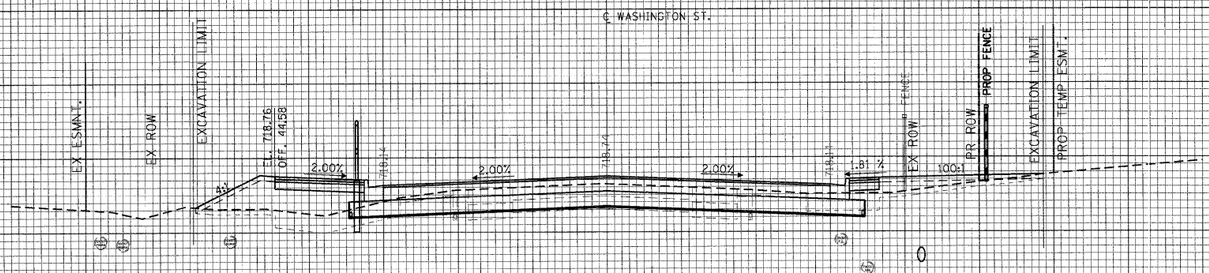
SUITABLE EARTH EXCAVATION = 70 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 61 SQ. FT.
TOTAL REQUIRED FILL = 38 SQ. FT.

140 + 50.00



SUITABLE EARTH EXCAVATION = 74 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 27 SQ. FT.
TOTAL REQUIRED FILL = 46 SQ. FT.

140 + 27.43



SUITABLE EARTH EXCAVATION = 45 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 44 SQ. FT.
TOTAL REQUIRED FILL = 62 SQ. FT.

140 + 00.00

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	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 140+00.00 TO STA. 140+50.00

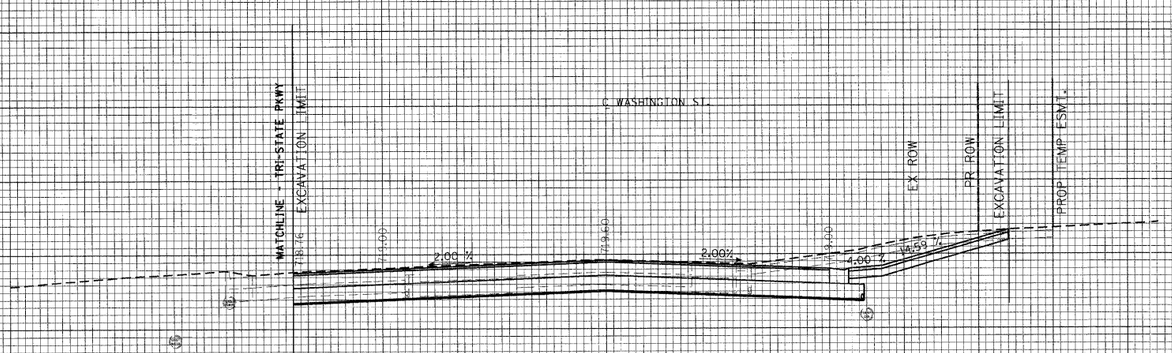
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	125
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

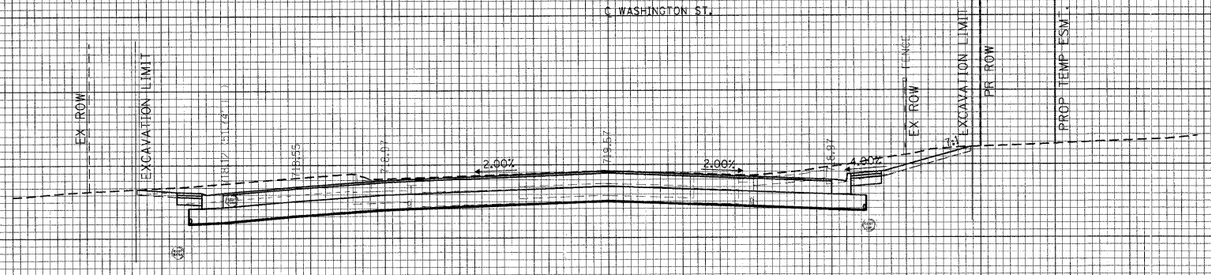
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FINAL SURVEY	SURVEYED	DATE
	PLOTTED	
NOTE BOOK	TEMPLATE	BY
NO.	AREAS	
	AREAS CHECKED	



SUITABLE EARTH EXCAVATION = 139 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 2 SQ. FT.
TOTAL REQUIRED FILL = 1 SQ. FT.

141 + 09.59



SUITABLE EARTH EXCAVATION = 128 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 50 SQ. FT.
TOTAL REQUIRED FILL = 1 SQ. FT.

141 + 00.00

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

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PLOT DATE = 05/29/09	DATE - 05/29/09		REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

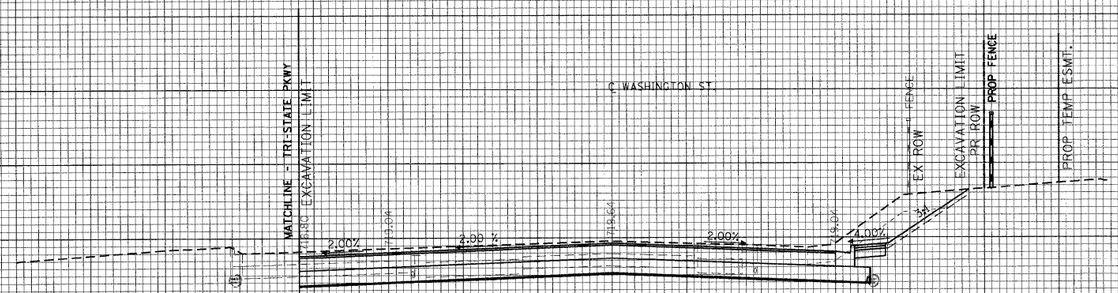
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 141+00.00 TO STA. 141+09.59

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	126
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SUITABLE EARTH EXCAVATION = 132 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 65 SQ. FT.
TOTAL REQUIRED FILL = 2 SQ. FT.

142 + 00.00



SUITABLE EARTH EXCAVATION = 124 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 26 SQ. FT.
TOTAL REQUIRED FILL = 1 SQ. FT.

141 + 50.00

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	PLOT SCALE = 10.0000 ' / IN.	CHECKED - KDN	REVISED -
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty Division of Transportation

WASHINGTON STREET – CROSS SECTION

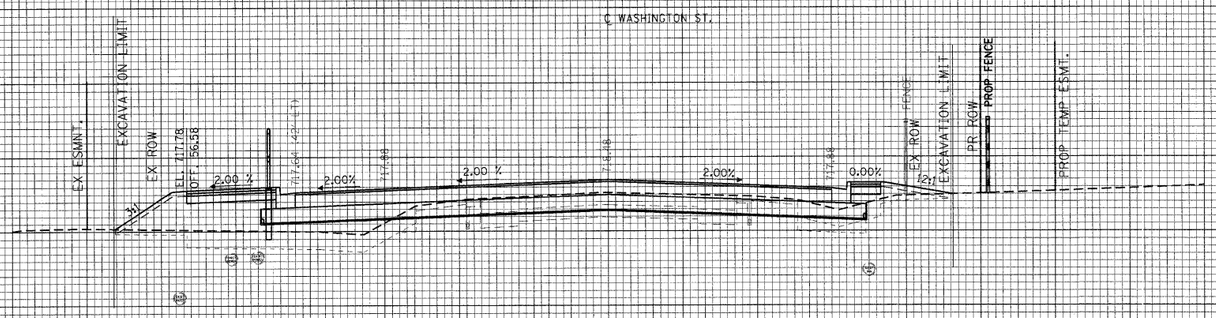
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 141+50.00 TO STA. 142+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	127
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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NOTE BOOK — NO.

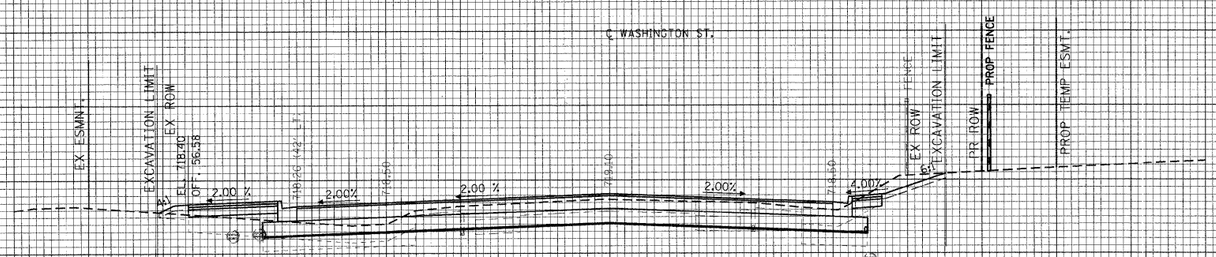
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NOTE BOOK — NO.

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SUITABLE EARTH EXCAVATION = 25 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 71 SQ. FT.
TOTAL REQUIRED FILL = 96 SQ. FT.

143+00.00



SUITABLE EARTH EXCAVATION = 50 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 106 SQ. FT.
TOTAL REQUIRED FILL = 27 SQ. FT.

142+50.00

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

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

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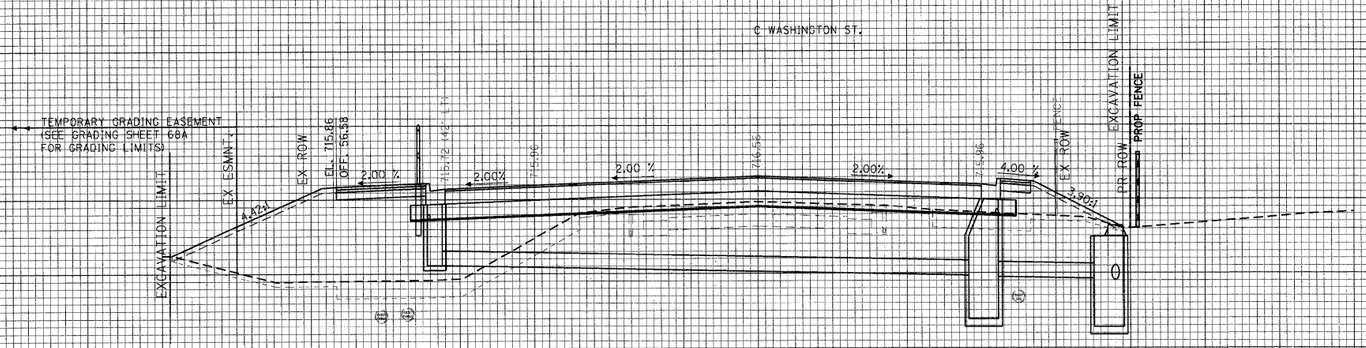
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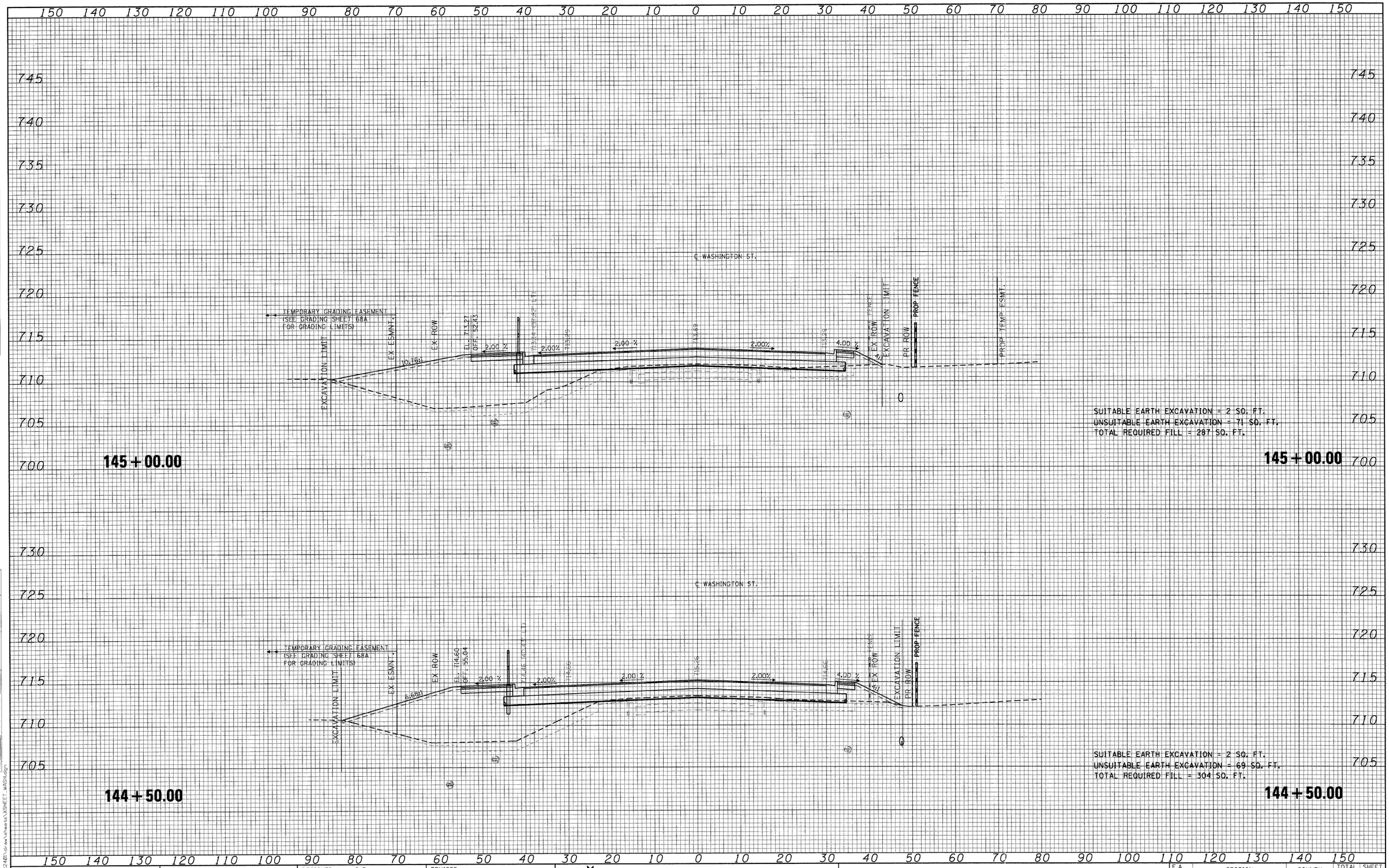
LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 142+50.00 TO STA. 143+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	128
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		


C WASHINGTON ST.
TEMPORARY GRADING EASEMENT
(SEE GRADING SHEET 68A
FOR GRADING LIMITS)
EXCAVATION LIMIT
EX ESMNT
EX ROW
EL= 715.86
OFF= 56.38
2.00 %
2.00%
2.00 %
2.00%
4.00 %
3:1
EX FENCE
EX ROW
PR ROW
EXCAVATION LIMIT
PROP FENCE
715.86
716.56
715.46
715.96
715.96
715.46
715.96
715.46
715.96
715.46



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

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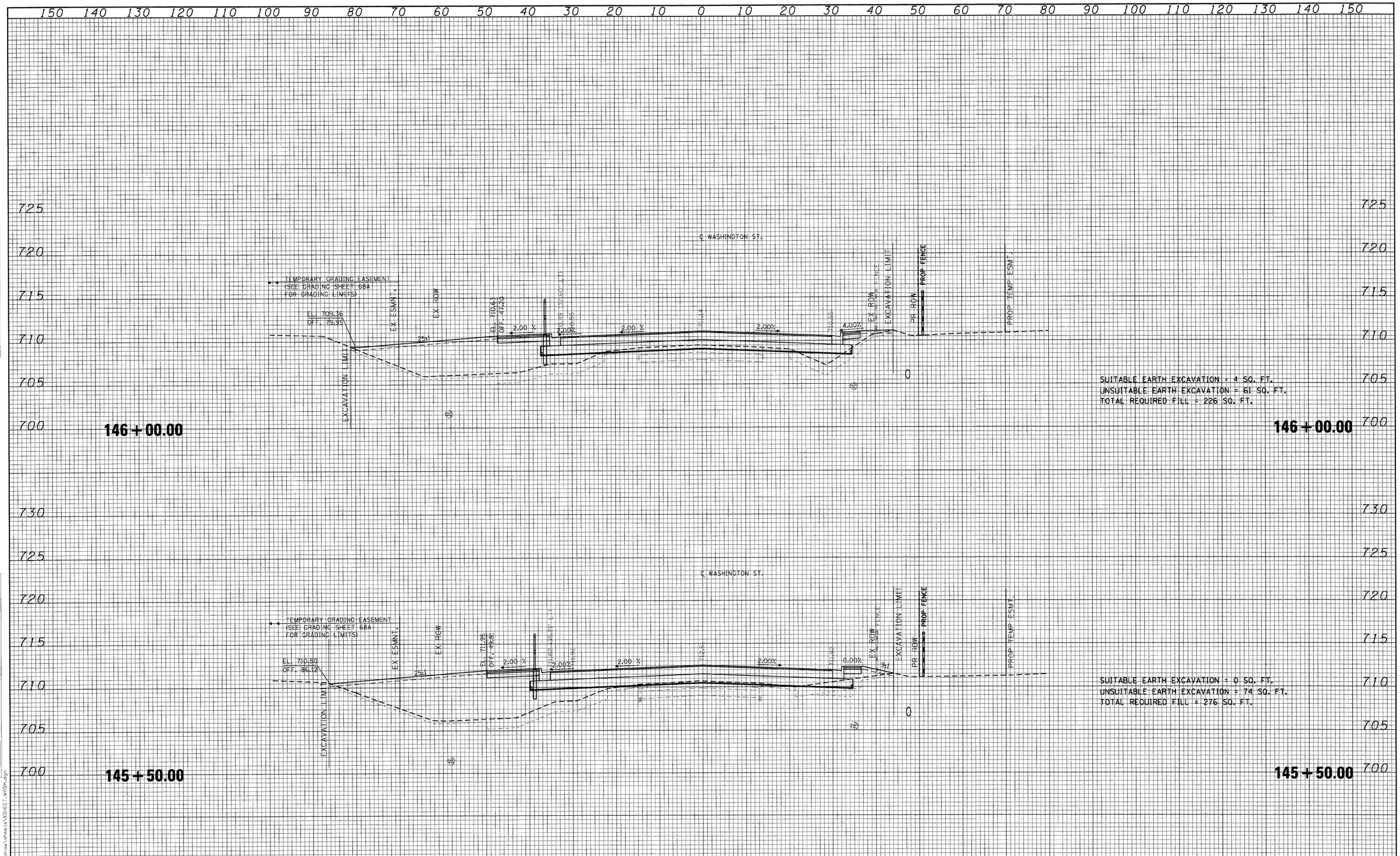
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 144+50.00 TO STA. 145+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	130
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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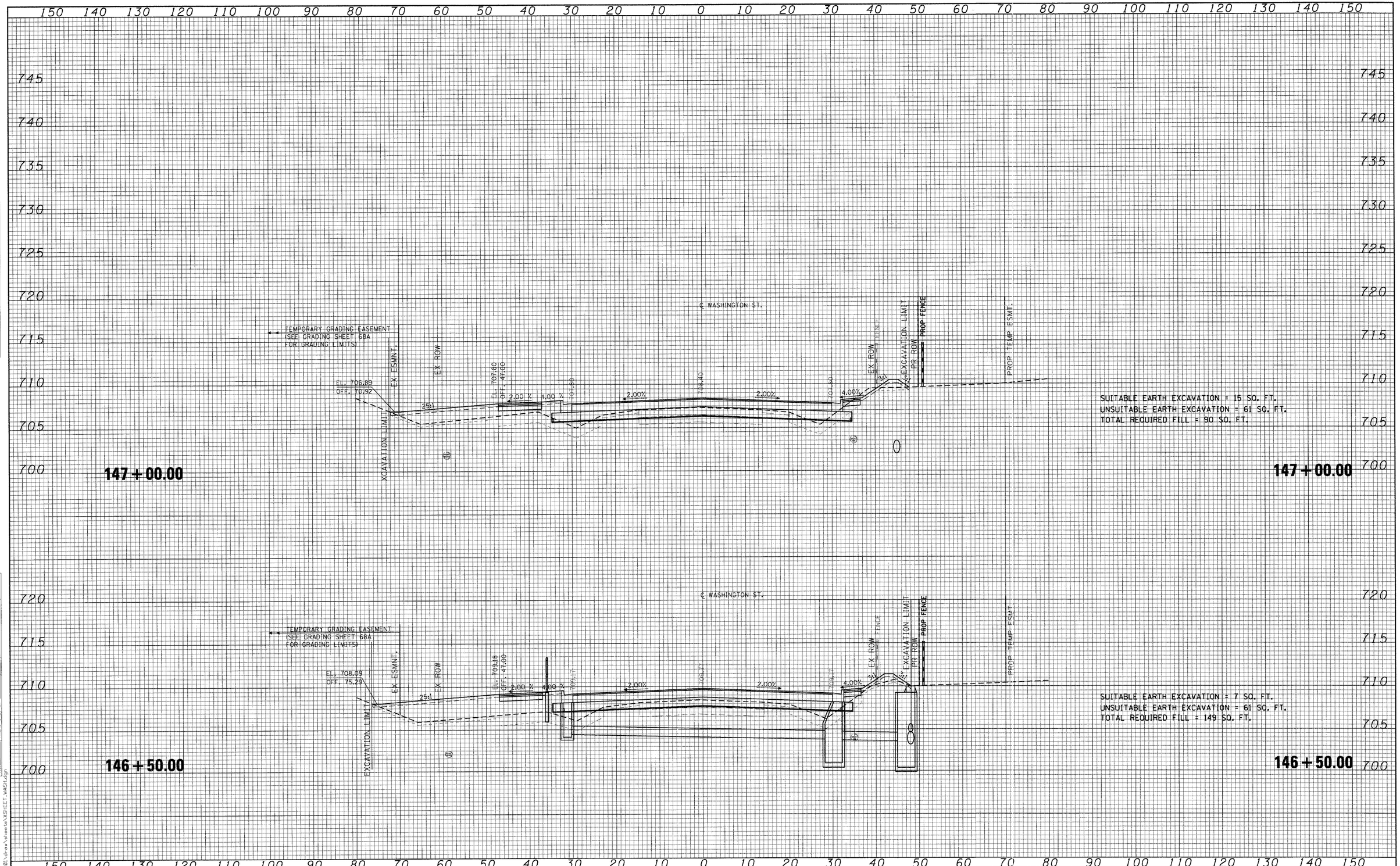
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 145+50.00 TO STA. 146+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	131
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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DATE - 05/29/09

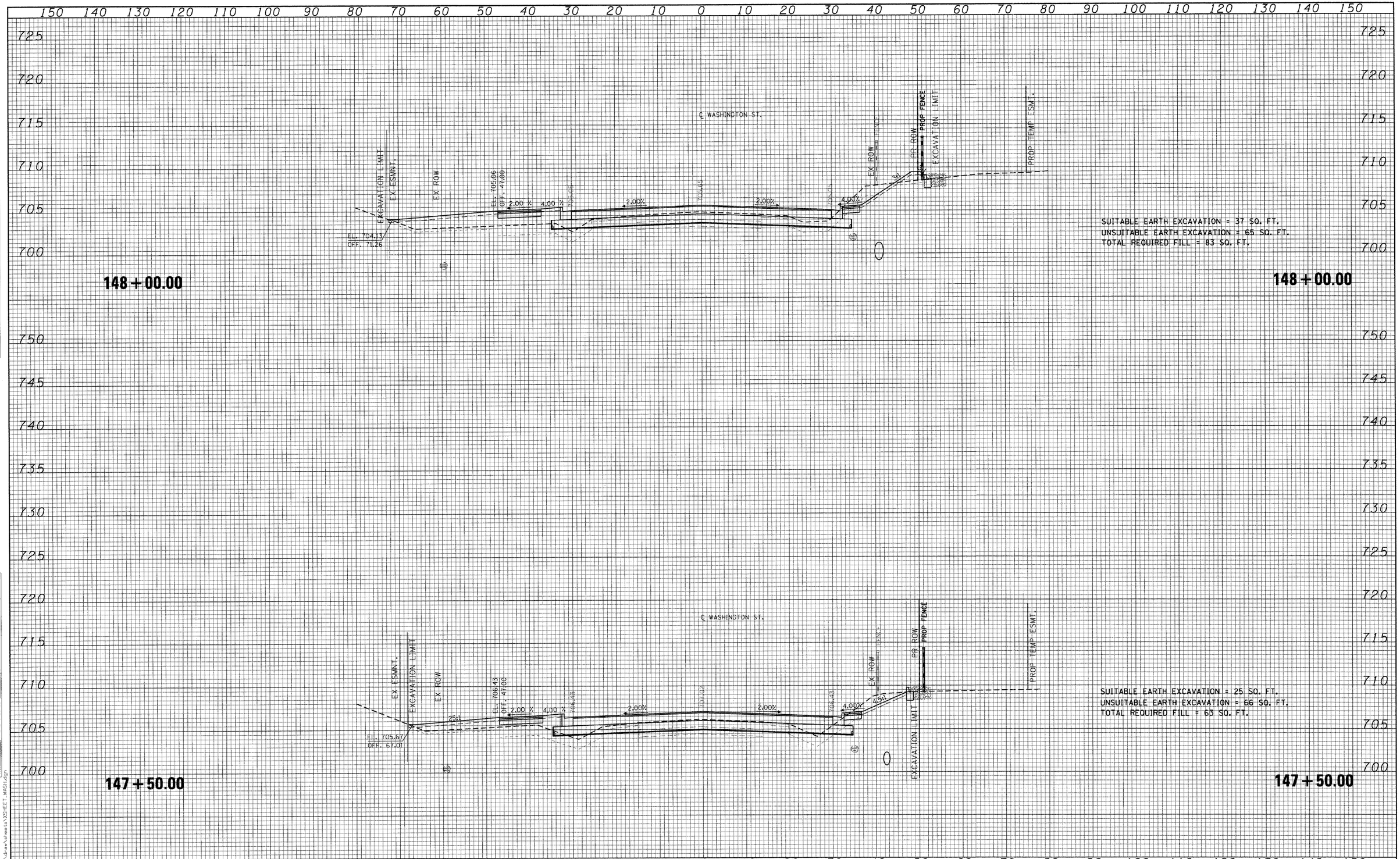
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REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 146+50.00 TO STA. 147+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	132
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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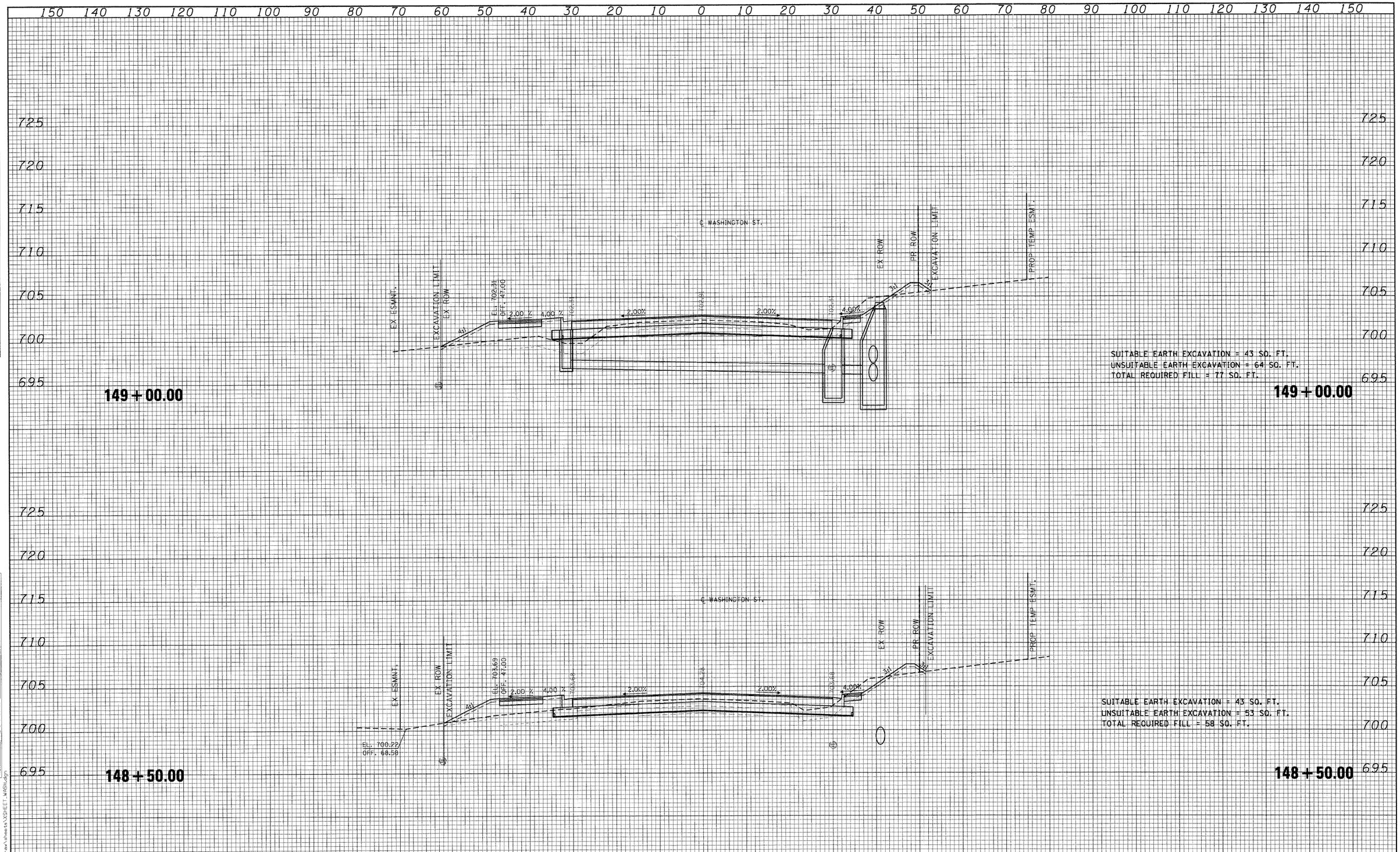
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 147+50.00 TO STA. 148+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	133
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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PLOT DATE = 05/29/09

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CHECKED - KDN	REVISED -	
DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 148+50.00 TO STA. 149+00.00

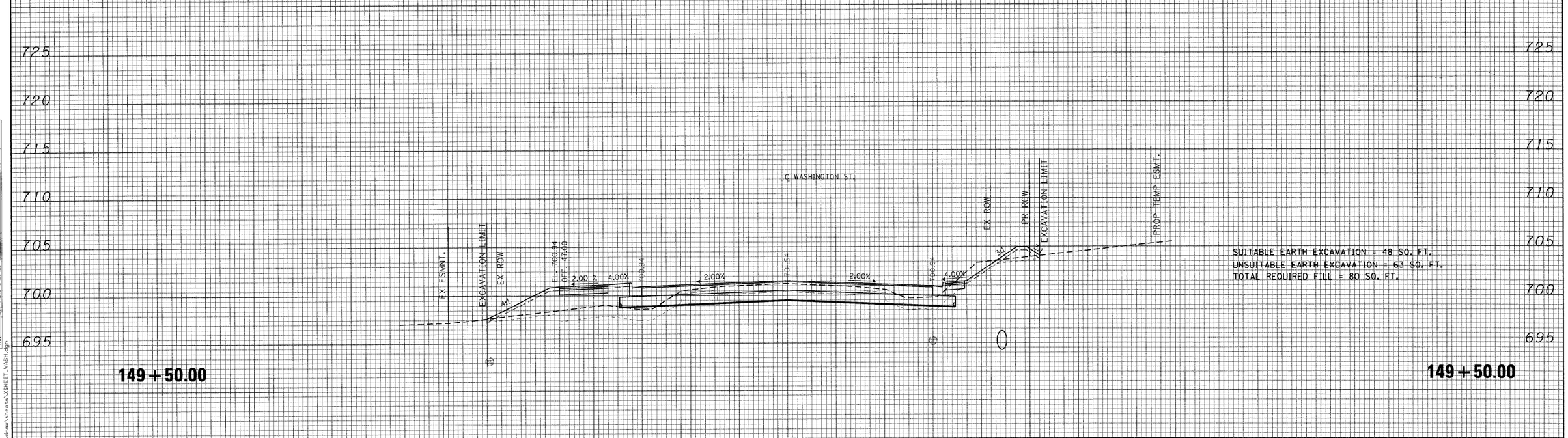
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	134
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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		



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LakeCounty
Division of Transportation

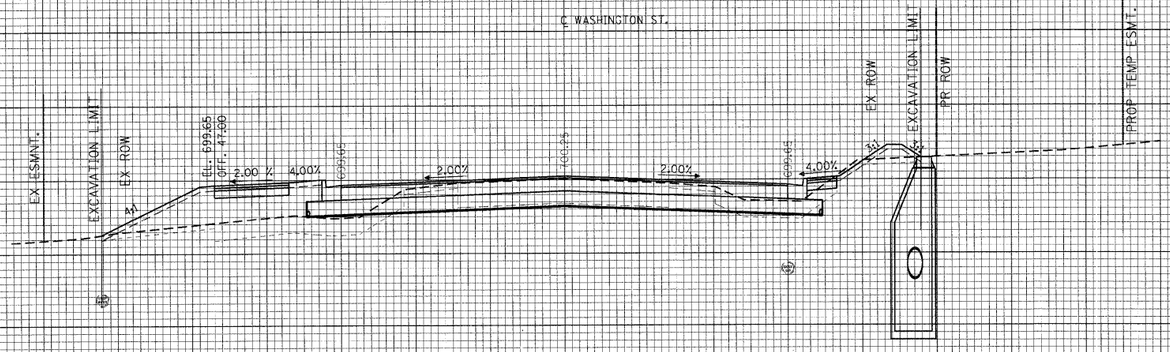
WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 149+50.00 TO STA. 149+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	135
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

765 760 755 750 745 740 735 730 725 720 715 710 705 700 695 690



SUITABLE EARTH EXCAVATION = 53 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 59 SQ. FT.
TOTAL REQUIRED FILL = 82 SQ. FT.

150 + 00.00

150 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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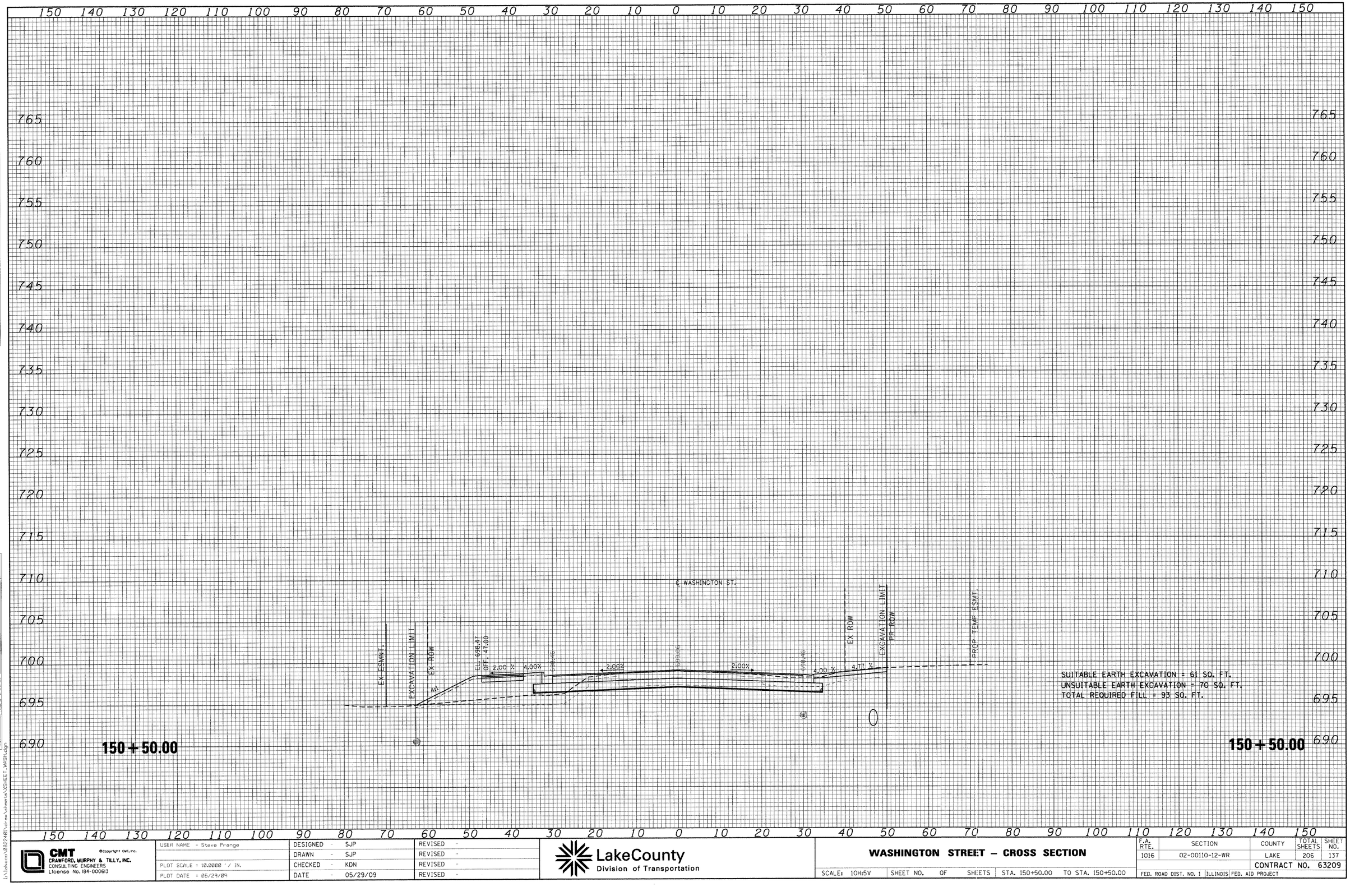
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 150+00.00 TO STA. 150+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	136
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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PLOT DATE = 05/29/09

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CHECKED - KDN
DATE - 05/29/09

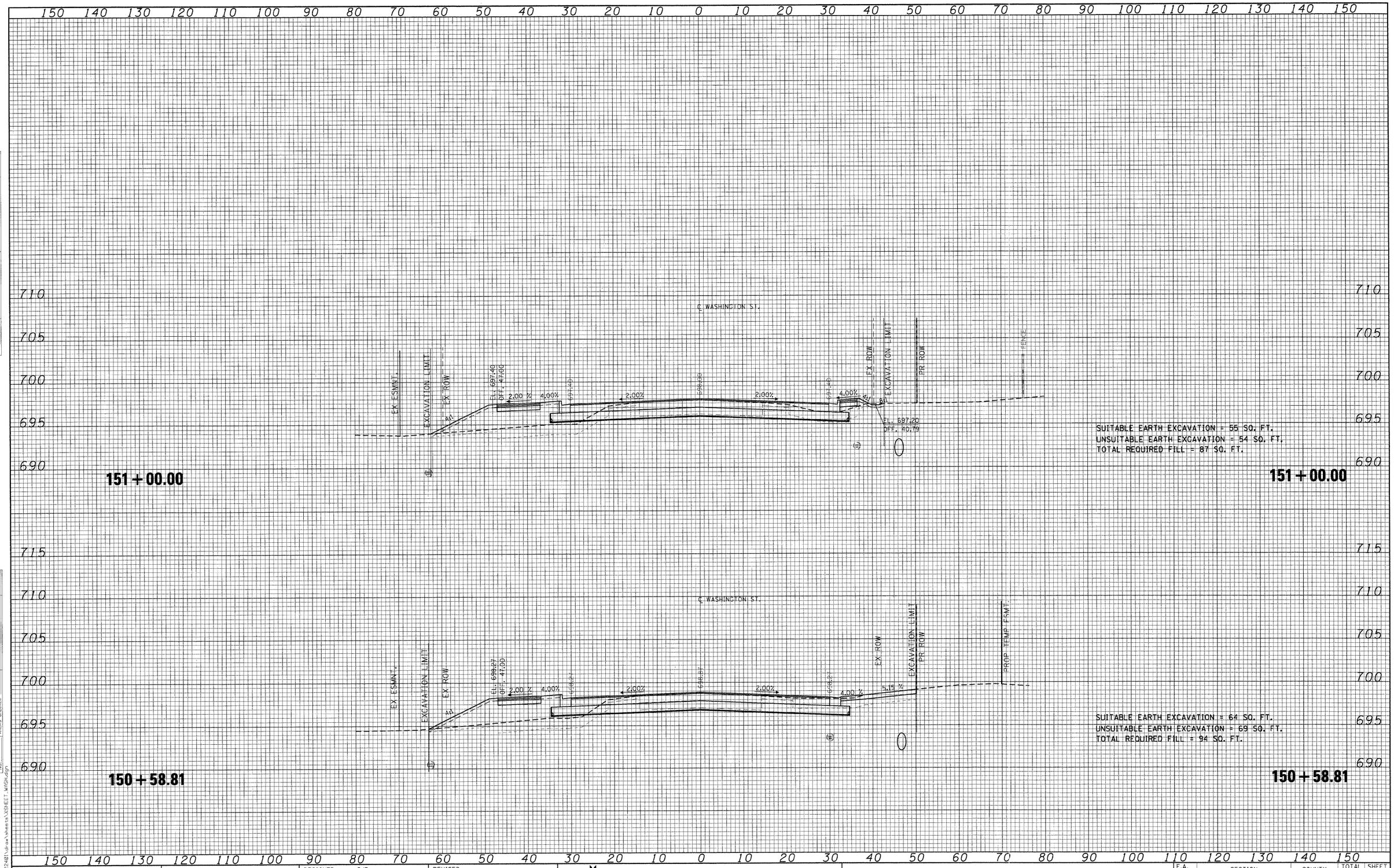
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 150+50.00 TO STA. 150+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	137
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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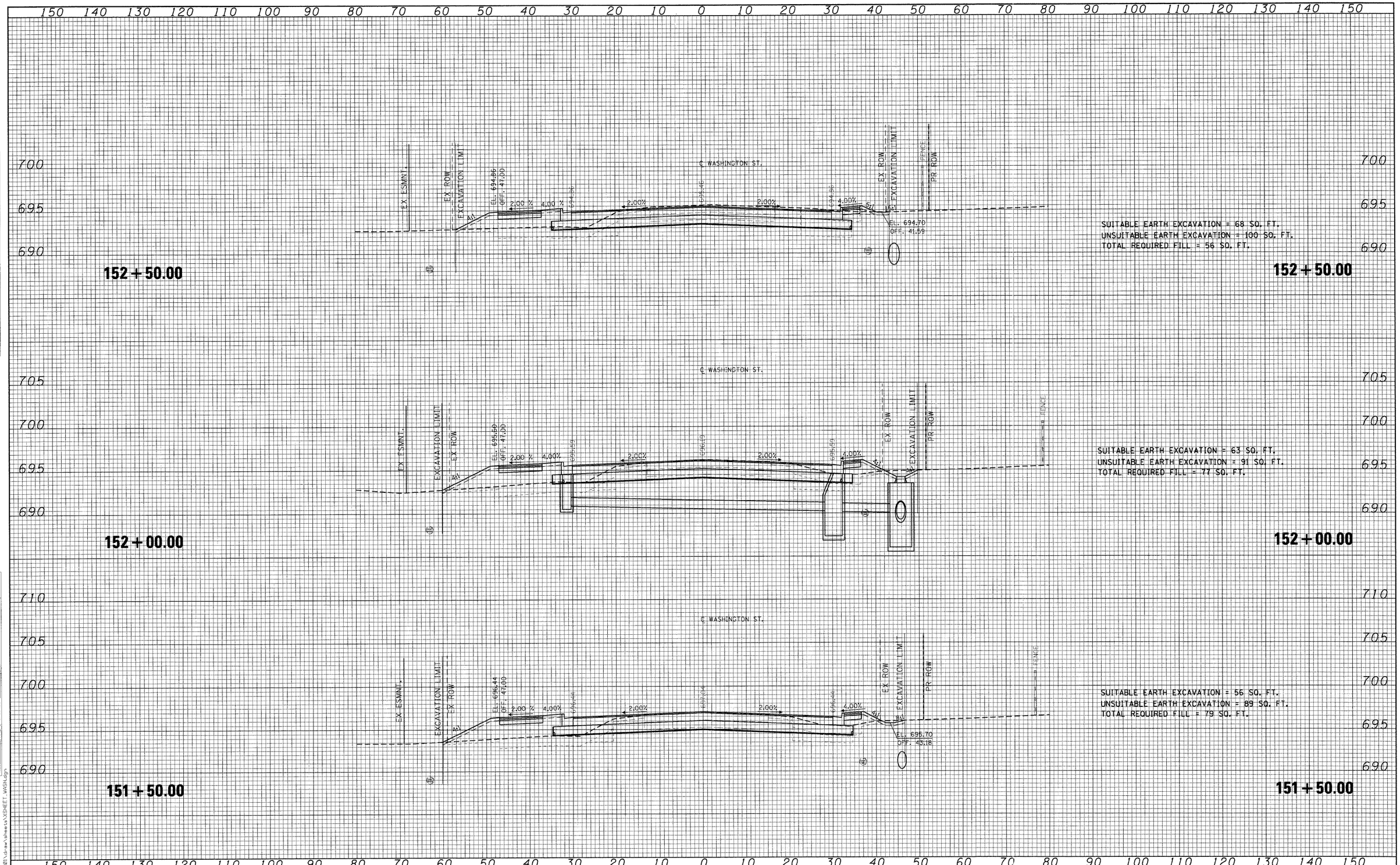
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DRAWN - SJP	REVISED	-
CHECKED - KDN	REVISED	-
DATE - 05/29/09	REVISED	-

LakeCounty Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 150+58.81 TO STA. 151+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	138
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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PLOT DATE = 05/29/09

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CHECKED - KDN
DATE - 05/29/09

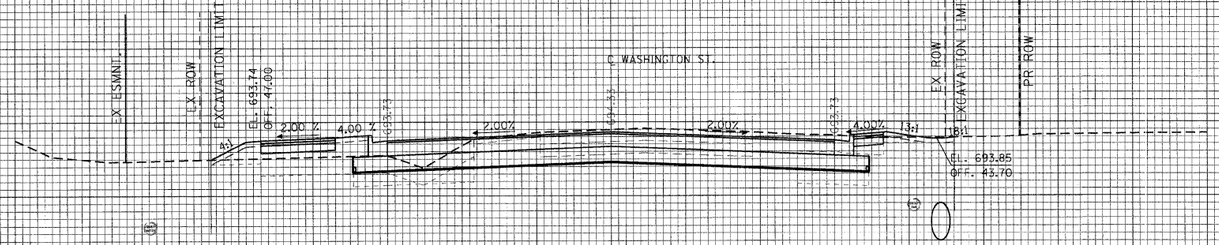
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 151+50.00 TO STA. 152+50.00

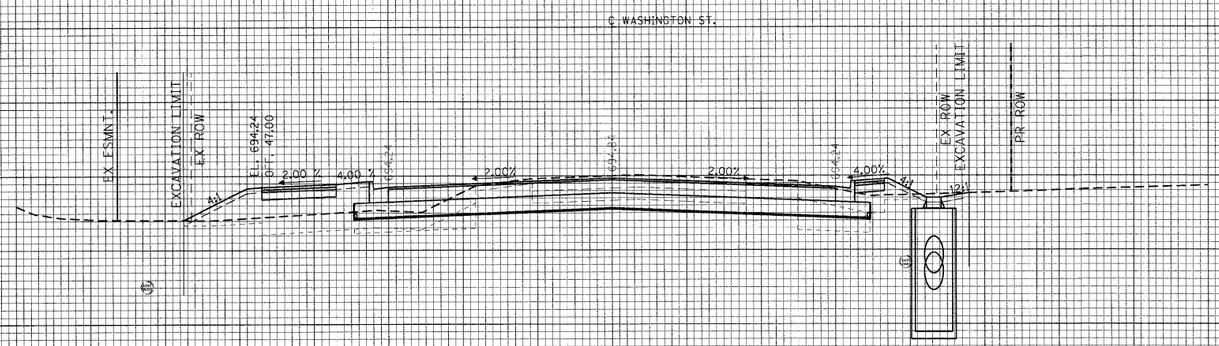
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	139
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



153 + 50.00

SUITABLE EARTH EXCAVATION = 76 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 102 SQ. FT.
TOTAL REQUIRED FILL = 37 SQ. FT.

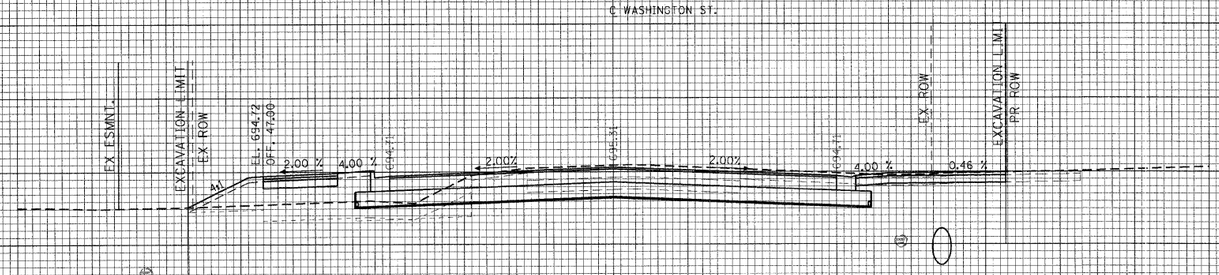
153 + 50.00



153 + 00.00

SUITABLE EARTH EXCAVATION = 75 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 94 SQ. FT.
TOTAL REQUIRED FILL = 61 SQ. FT.

153 + 00.00



152 + 61.07

SUITABLE EARTH EXCAVATION = 96 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 49 SQ. FT.
TOTAL REQUIRED FILL = 54 SQ. FT.

152 + 61.07

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

ORIGINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
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	AREAS	
	AREAS CHECKED	

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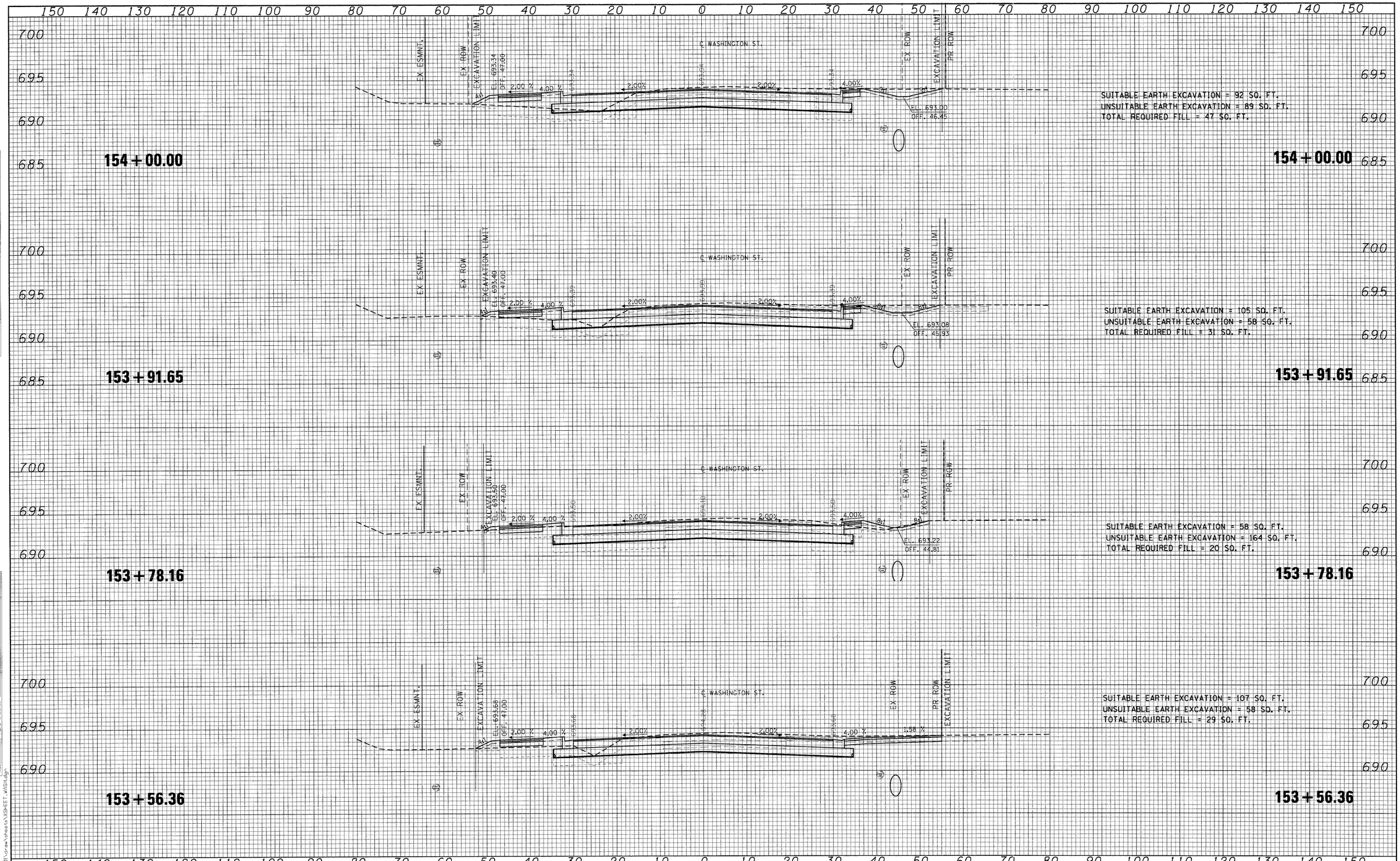
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 152+61.07 TO STA. 153+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	140
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
PAGE NO.		
AREAS CHECKED		

ORIGINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
PAGE NO.		
AREAS CHECKED		

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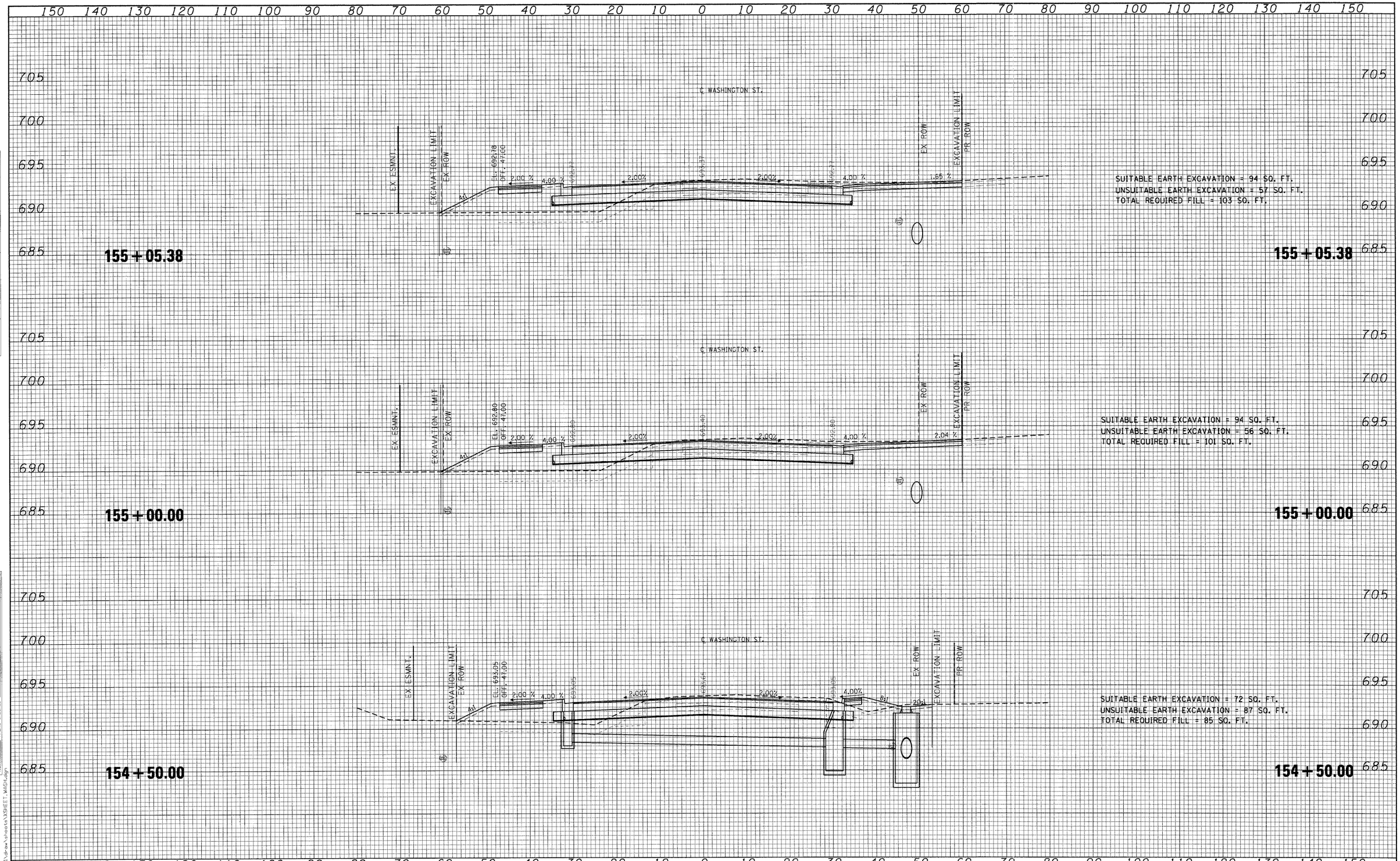
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 153+56.36 TO STA. 154+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	141
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

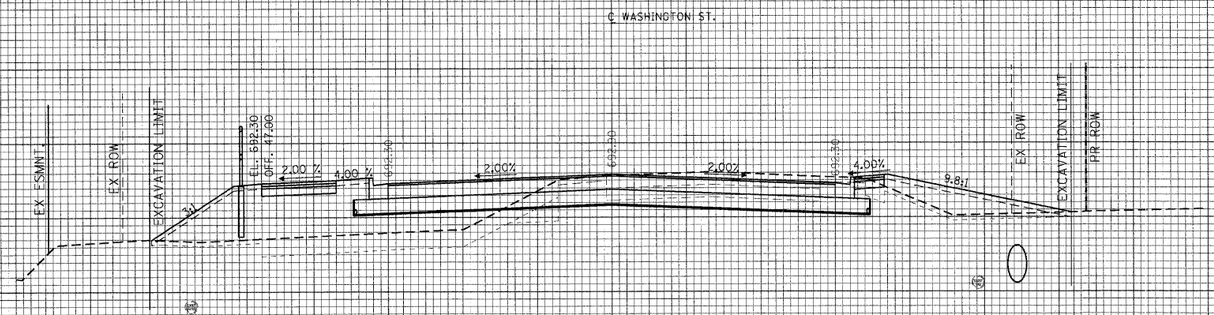
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	142
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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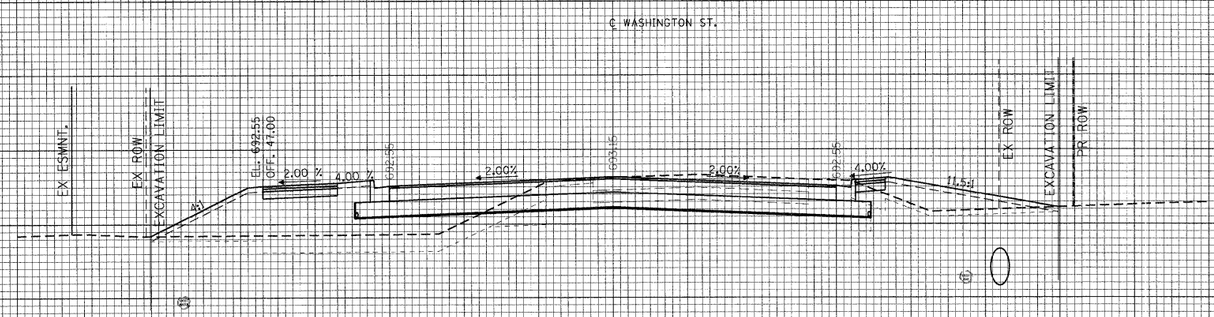
710 705 700 695 690 685



SUITABLE EARTH EXCAVATION = 69 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 72 SQ. FT.
TOTAL REQUIRED FILL = 168 SQ. FT.

156 + 00.00

710 705 700 695 690 685



SUITABLE EARTH EXCAVATION = 66 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 82 SQ. FT.
TOTAL REQUIRED FILL = 147 SQ. FT.

155 + 50.00

710 705 700 695 690 685

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

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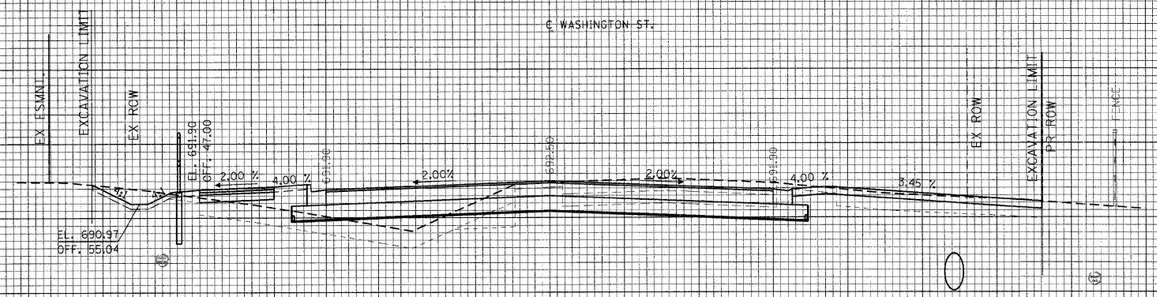
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

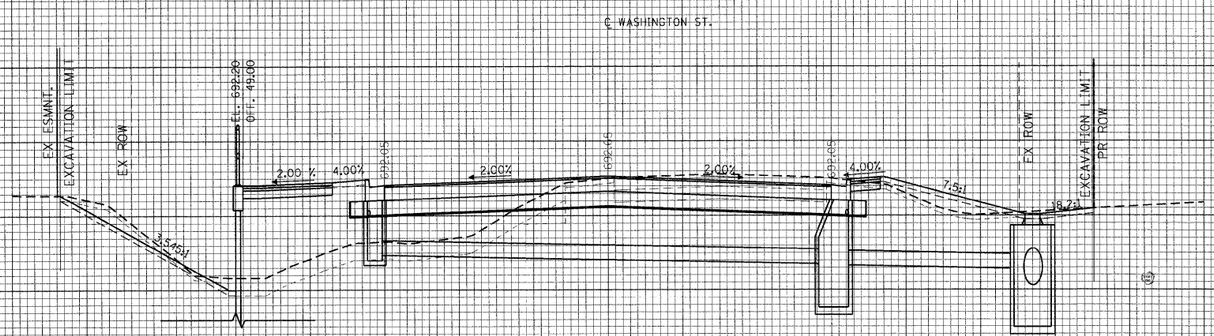
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 155+50.00 TO STA. 156+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	143
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SUITABLE EARTH EXCAVATION = 68 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 105 SQ. FT.
TOTAL REQUIRED FILL = 77 SQ. FT.

156 + 80.33



SUITABLE EARTH EXCAVATION = 79 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 78 SQ. FT.
TOTAL REQUIRED FILL = 167 SQ. FT.

156 + 50.00

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

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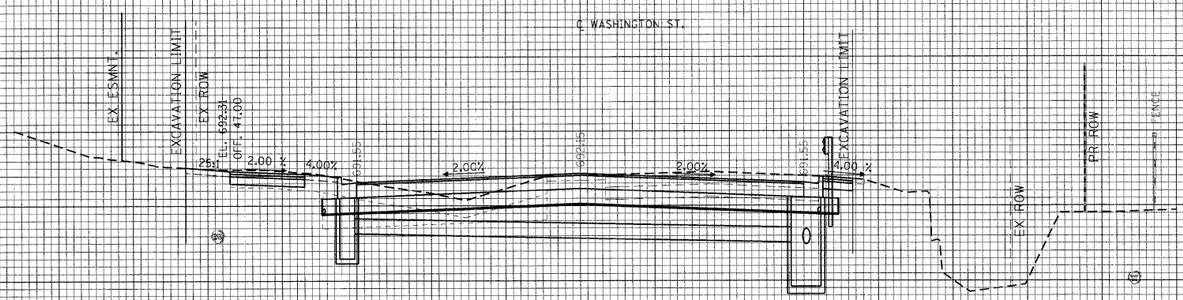
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

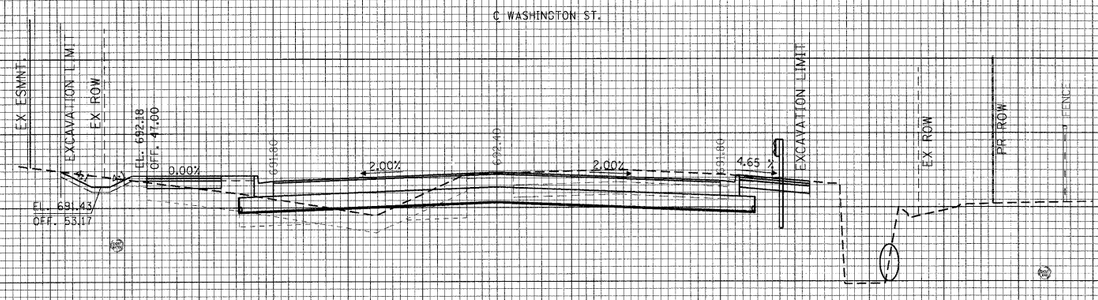
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 156+50.00 TO STA. 156+80.33

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	144
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SUITABLE EARTH EXCAVATION = 65 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 117 SQ. FT.
TOTAL REQUIRED FILL = 10 SQ. FT.

157 + 50.00



SUITABLE EARTH EXCAVATION = 71 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 83 SQ. FT.
TOTAL REQUIRED FILL = 43 SQ. FT.

157 + 00.00

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LakeCounty Division of Transportation

WASHINGTON STREET – CROSS SECTION

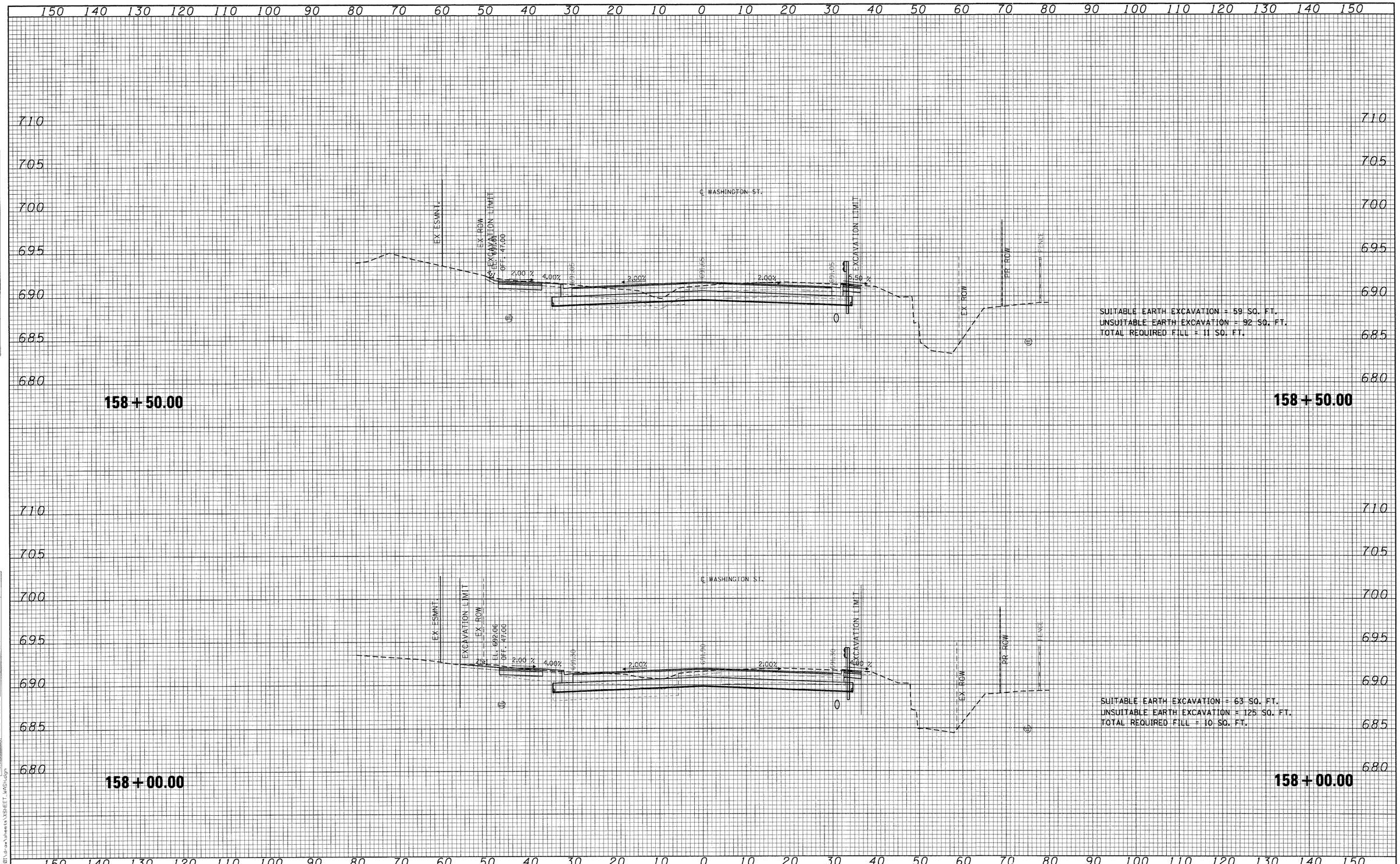
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	145
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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FINAL SURVEY / ORIGINAL SURVEY

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

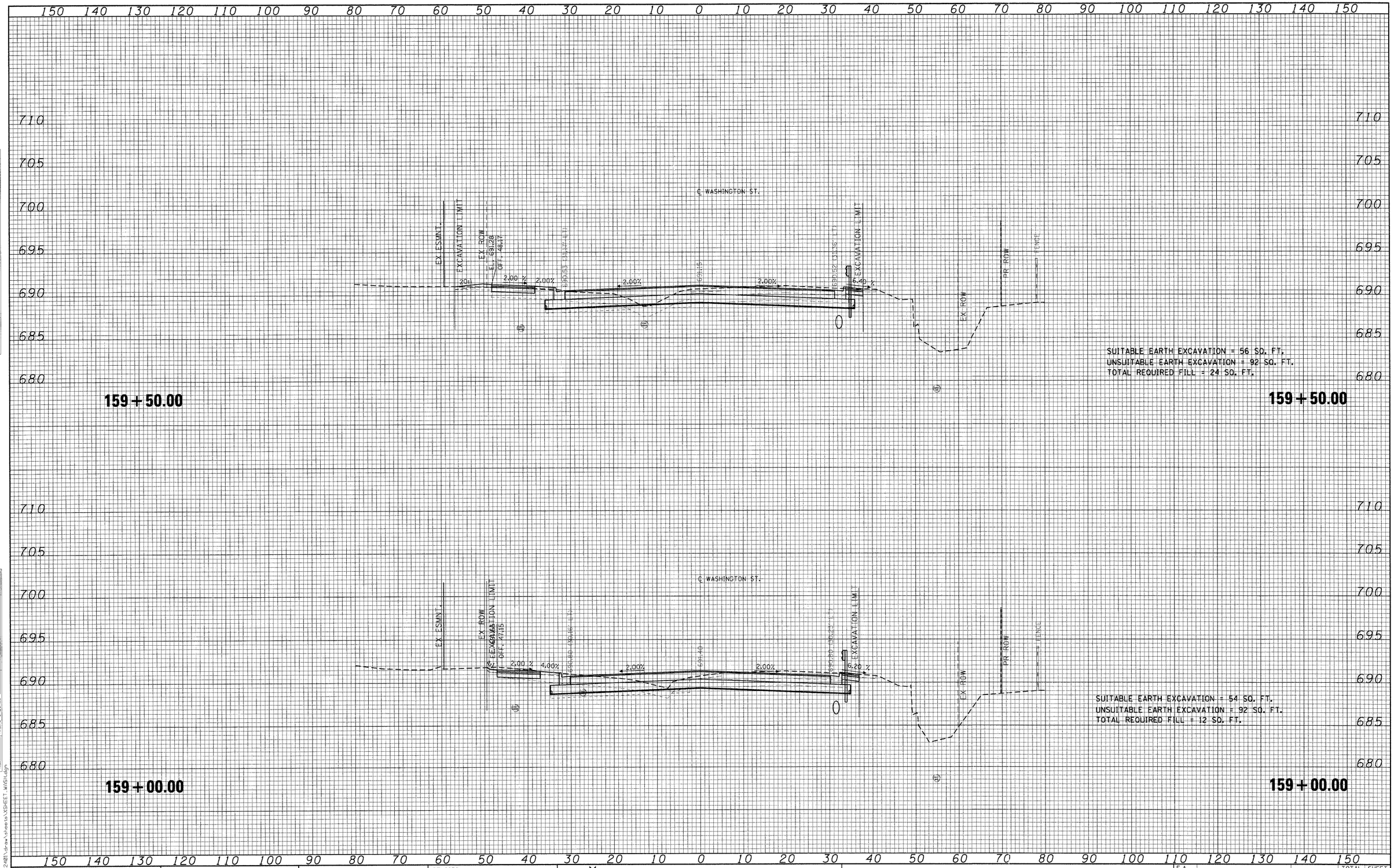
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		DRAWN - SJP	REVISED -	
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - KDN	REVISED -	
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 158+00.00 TO STA. 158+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	146
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 159+00.00 TO STA. 159+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	147
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

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715 715

710 710

705 705

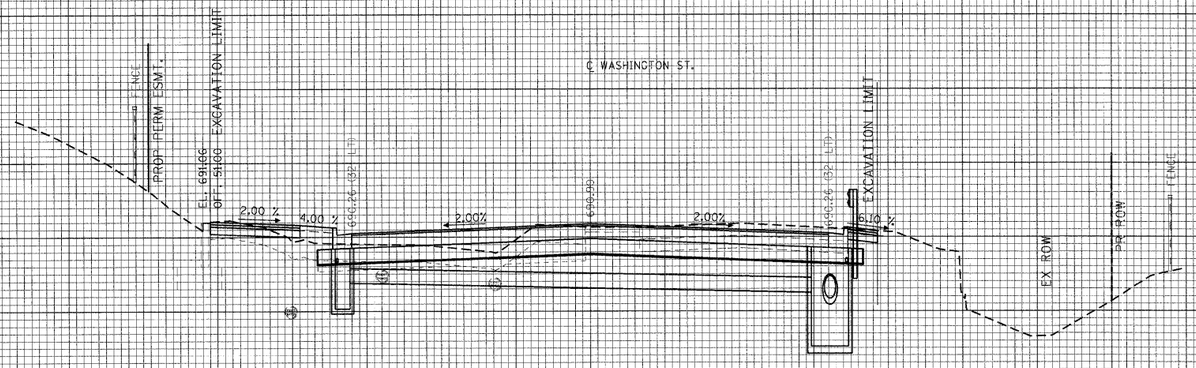
700 700

695 695

690 690

685 685

680 680



SUITABLE EARTH EXCAVATION = 59 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 92 SQ. FT.
TOTAL REQUIRED FILL = 22 SQ. FT.

160+00.00 **160+00.00**

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

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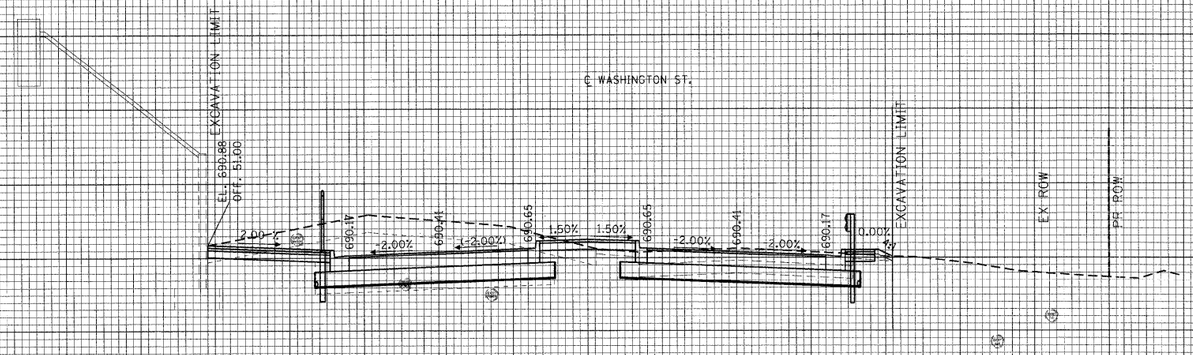
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1016	02-00110-12-WR	LAKE	206	148
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

755 750 745 740 735 730 725 720 715 710 705 700 695 690 685



SUITABLE EARTH EXCAVATION = 47 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 189 SQ. FT.
TOTAL REQUIRED FILL = 10 SQ. FT.

160 + 50.00

160 + 50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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PLOT SCALE = 10.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

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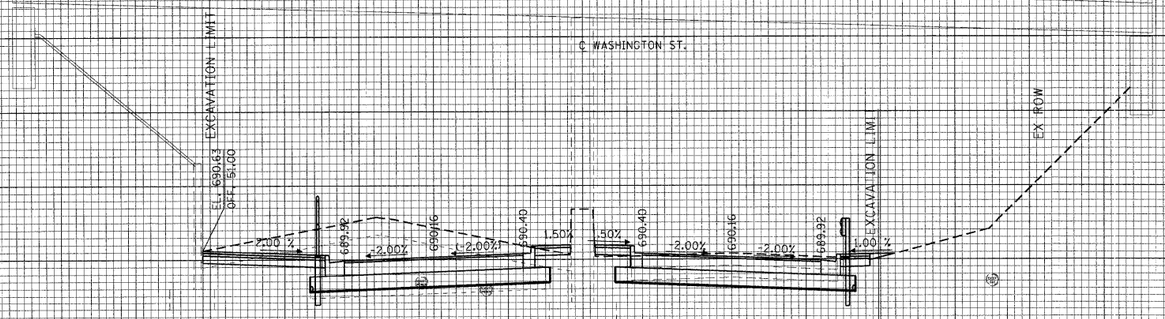
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	149
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

740 735 730 725 720 715 710 705 700 695 690 685



SUITABLE EARTH EXCAVATION = 49 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 179 SQ. FT.
TOTAL REQUIRED FILL = 10 SQ. FT.

161 + 00.00

161 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

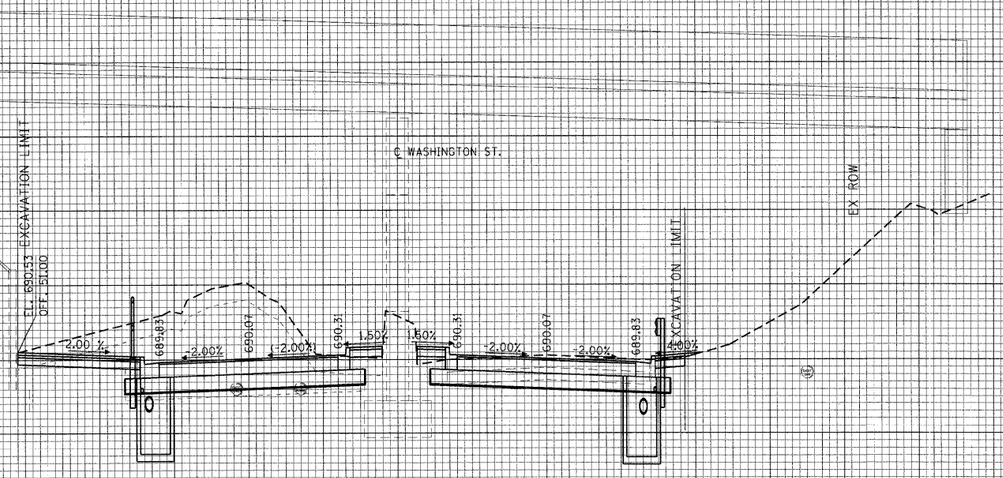
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	150
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

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SUITABLE EARTH EXCAVATION = 47 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 215 SQ. FT.
TOTAL REQUIRED FILL = 10 SQ. FT.

161+50.00 **161+50.00**

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

Lake County
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 161+50.00 TO STA. 161+50.00

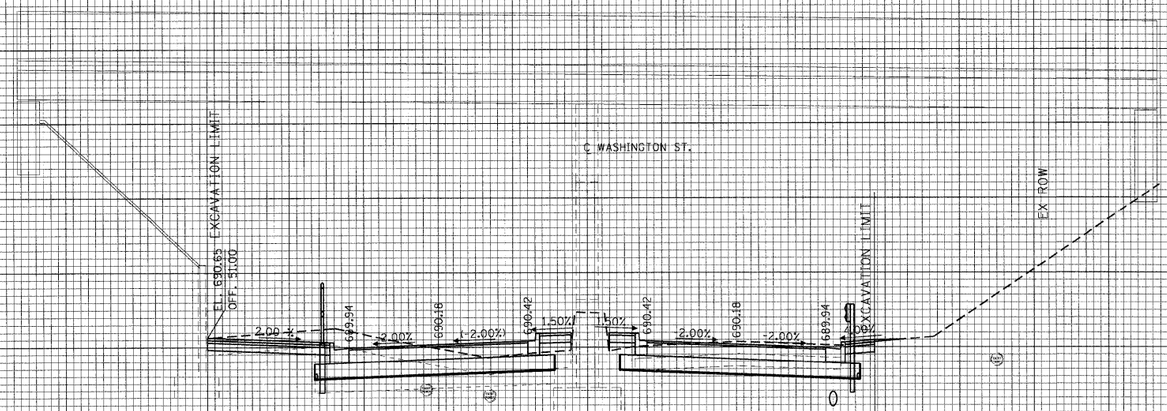
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	151
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

740 735 730 725 720 715 710 705 700 695 690 685



SUITABLE EARTH EXCAVATION = 49 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 144 SQ. FT.
TOTAL REQUIRED FILL = 11 SQ. FT.

162+00.00 **162+00.00**

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

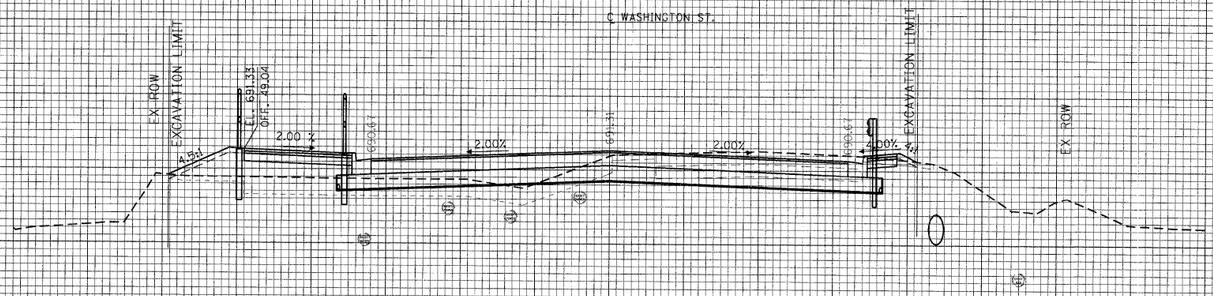
LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 162+00.00 TO STA. 162+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	152
		CONTRACT NO. 63209		

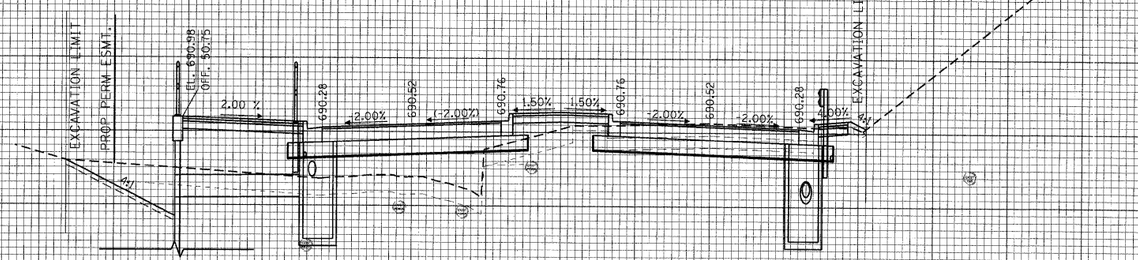
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



163 + 00.00

SUITABLE EARTH EXCAVATION = 59 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 61 SQ. FT.
TOTAL REQUIRED FILL = 66 SQ. FT.

163 + 00.00



162 + 50.00

SUITABLE EARTH EXCAVATION = 58 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 82 SQ. FT.
TOTAL REQUIRED FILL = 152 SQ. FT.

162 + 50.00

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

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

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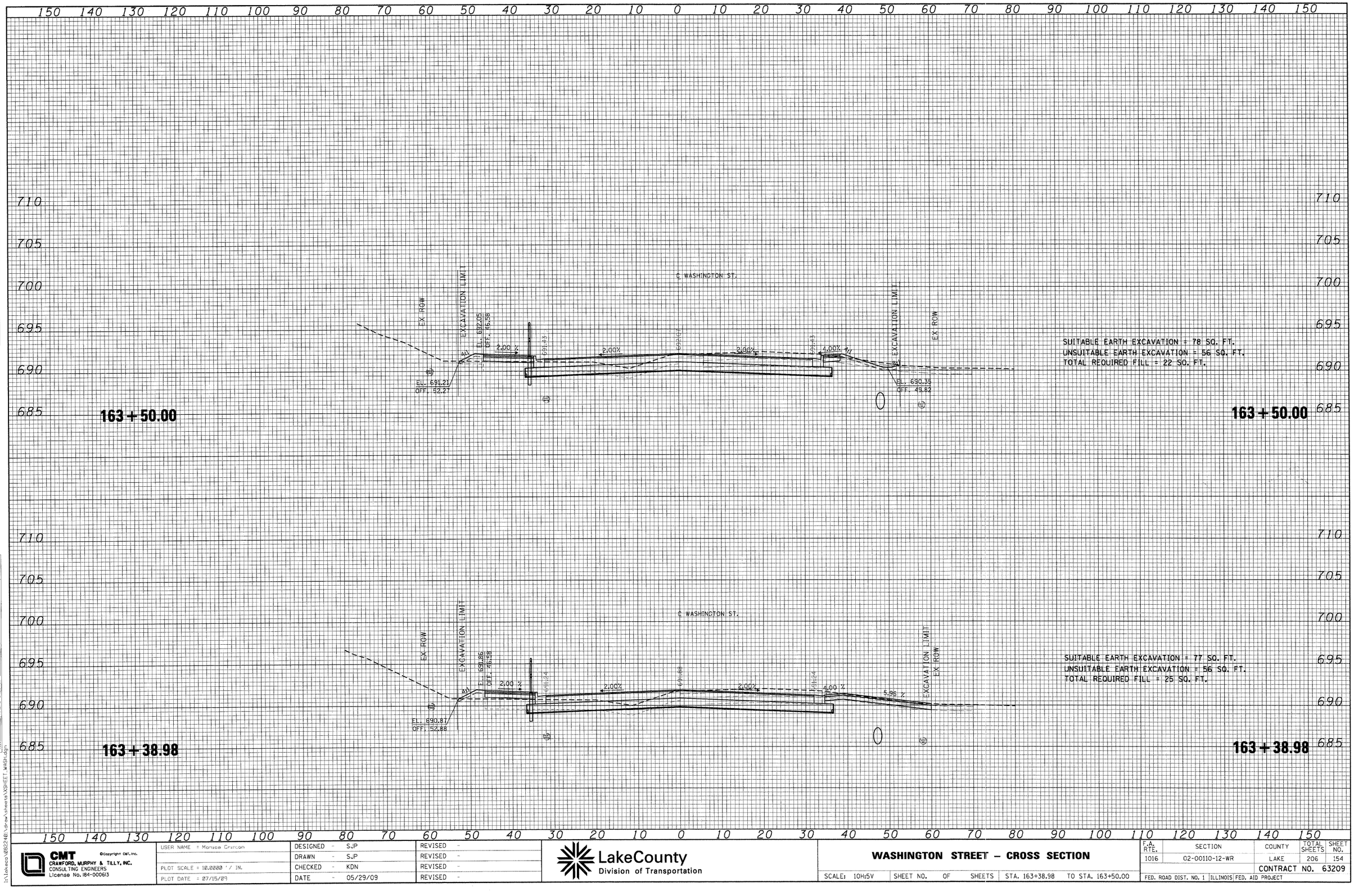
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 162+50.00 TO STA. 163+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	153
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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	DRAWN - SJP	REVISED -
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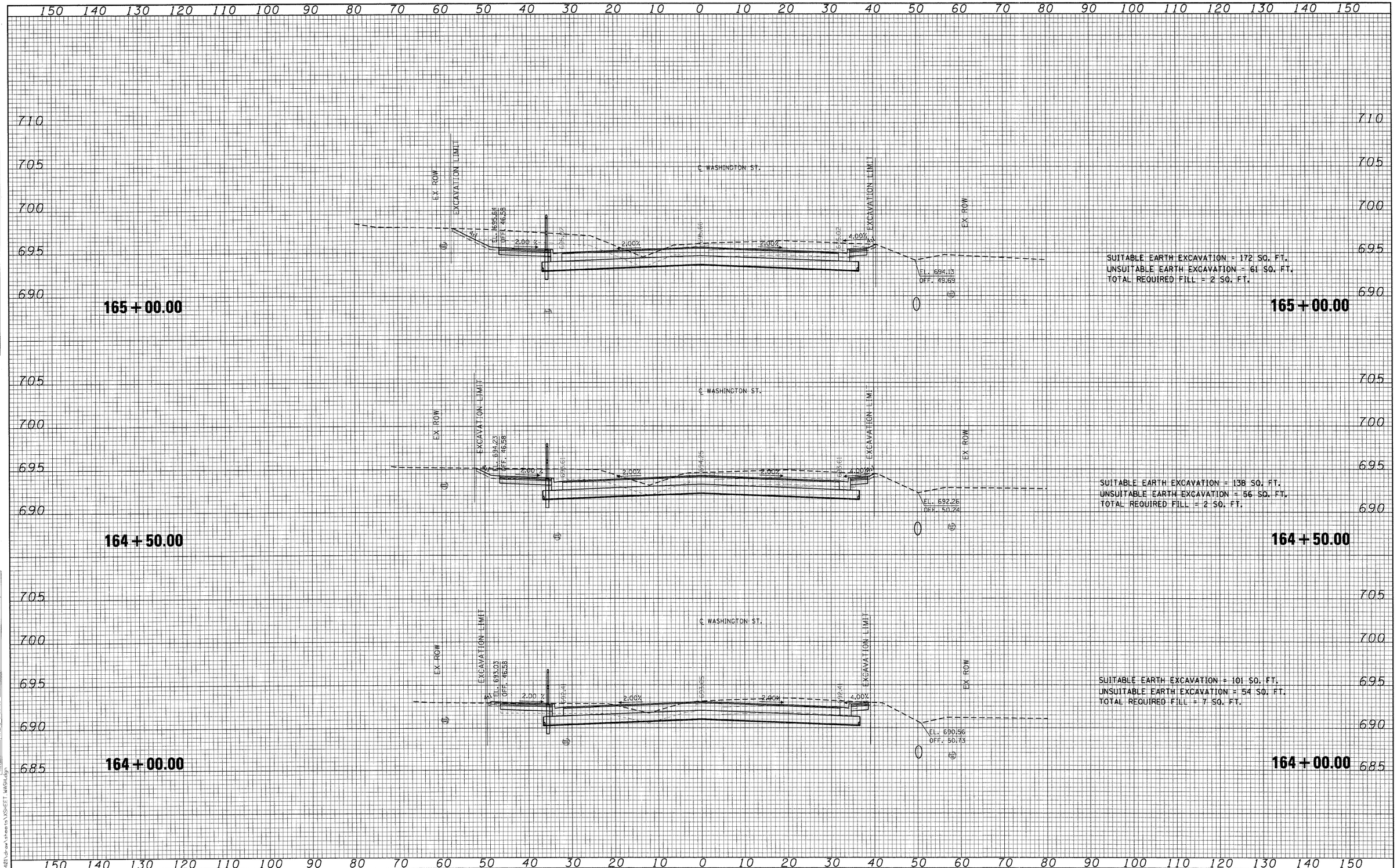
LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 163+38.98 TO STA. 163+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	154
		CONTRACT NO. 63209		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



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

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PLOT DATE = 07/15/09

DESIGNED - SJP	REVISED -	
DRAWN - SJP	REVISED -	
CHECKED - KDN	REVISED -	
DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

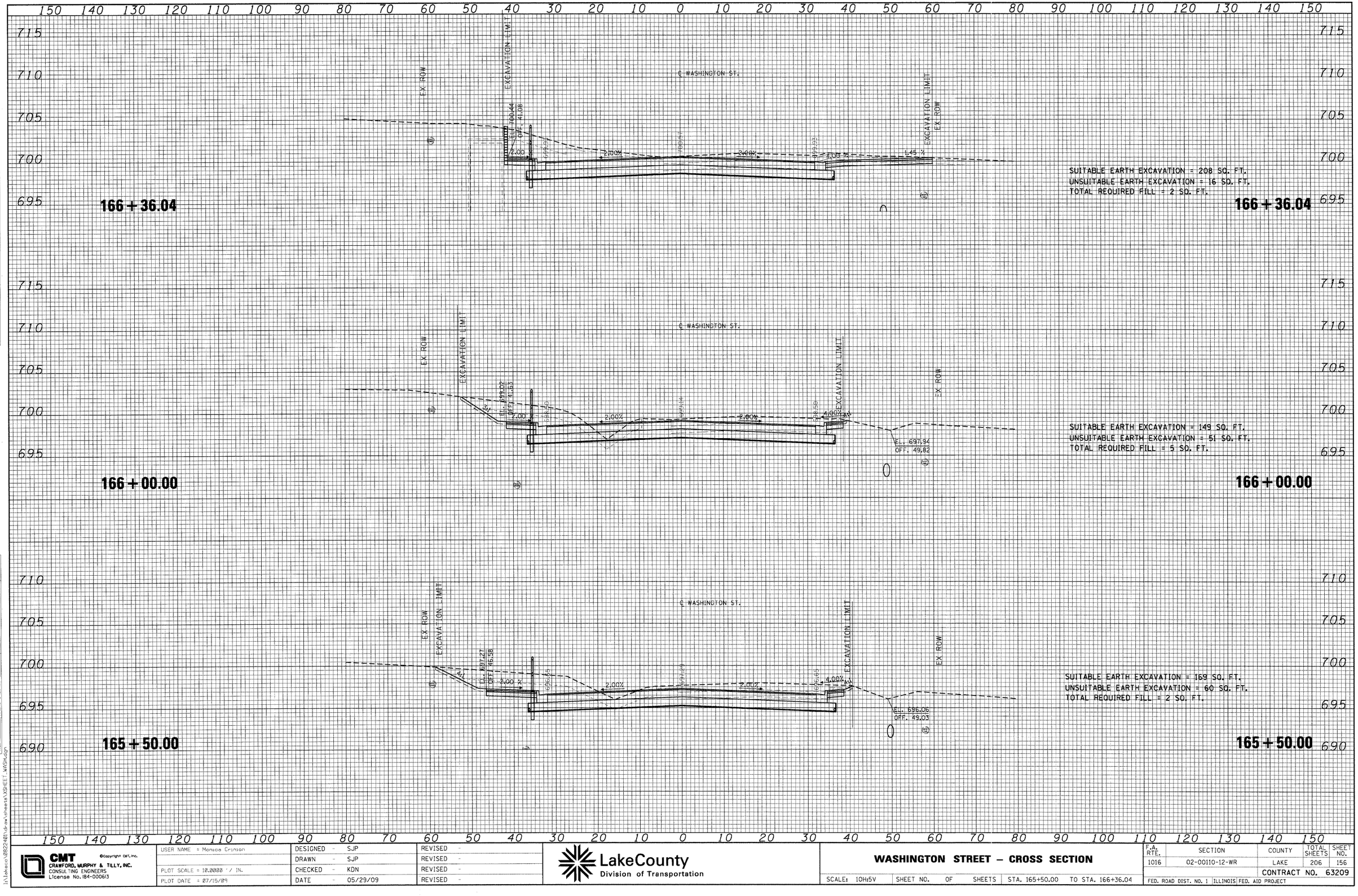
WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 164+00.00 TO STA. 165+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	155

CONTRACT NO. 63209

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



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

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

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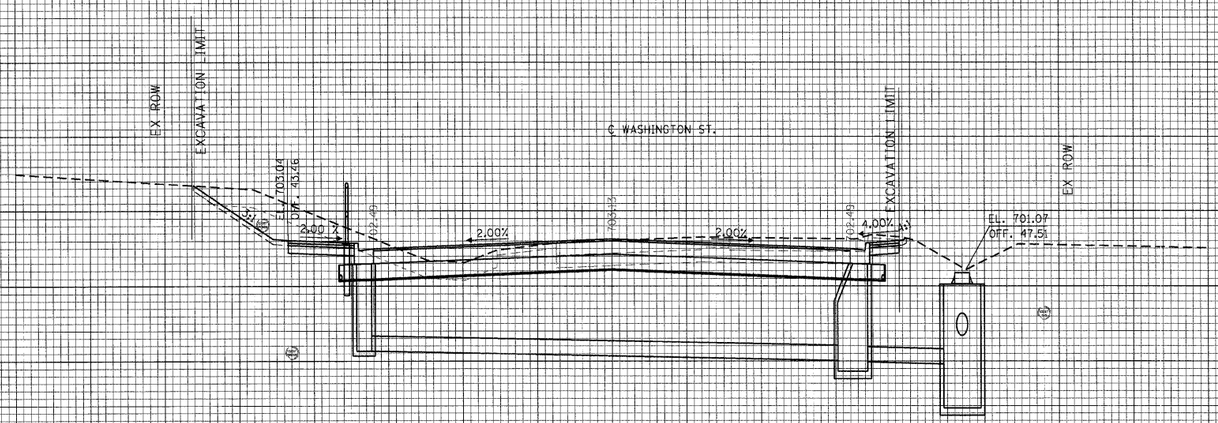
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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

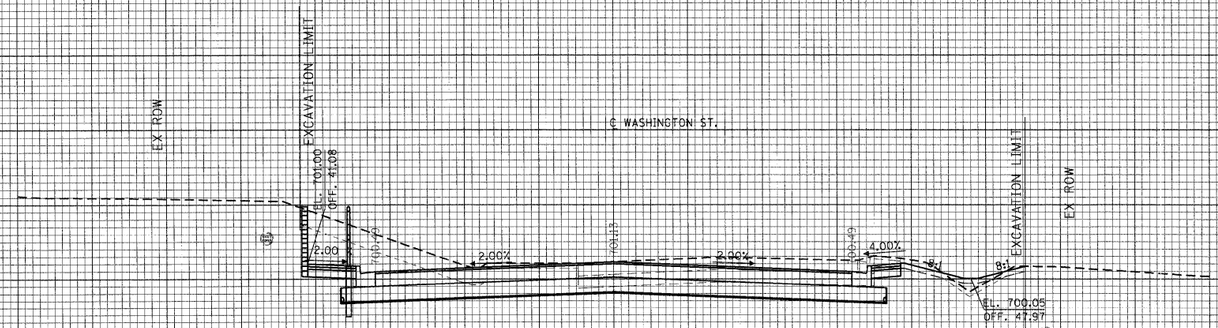
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 165+50.00 TO STA. 166+36.04

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	156
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SUITABLE EARTH EXCAVATION = 120 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 46 SQ. FT.
TOTAL REQUIRED FILL = 4 SQ. FT.

167 + 00.00



SUITABLE EARTH EXCAVATION = 158 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 36 SQ. FT.
TOTAL REQUIRED FILL = 6 SQ. FT.

166 + 50.00

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

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

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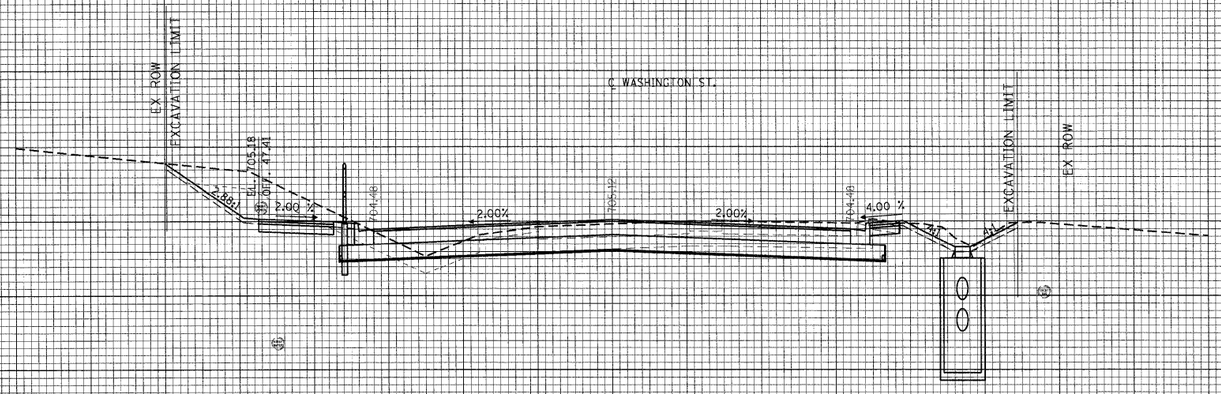
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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 166+50.00 TO STA. 167+00.00

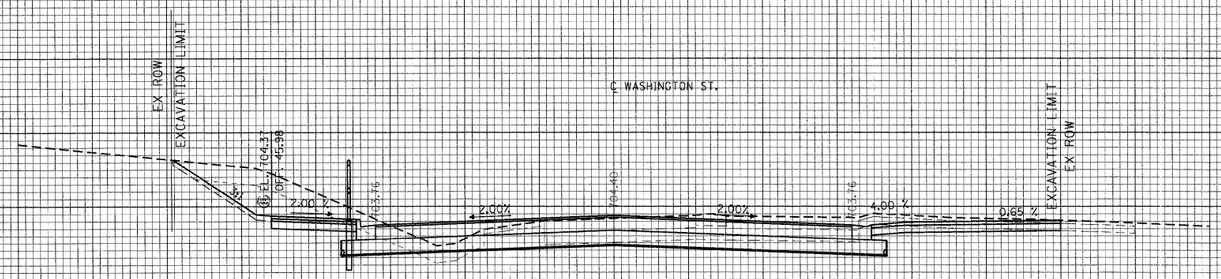
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	157
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



167 + 50.00

SUITABLE EARTH EXCAVATION = 108 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 58 SQ. FT.
TOTAL REQUIRED FILL = 10 SQ. FT.

167 + 50.00



167 + 31.83

SUITABLE EARTH EXCAVATION = 137 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 47 SQ. FT.
TOTAL REQUIRED FILL = 6 SQ. FT.

167 + 31.83

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	PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

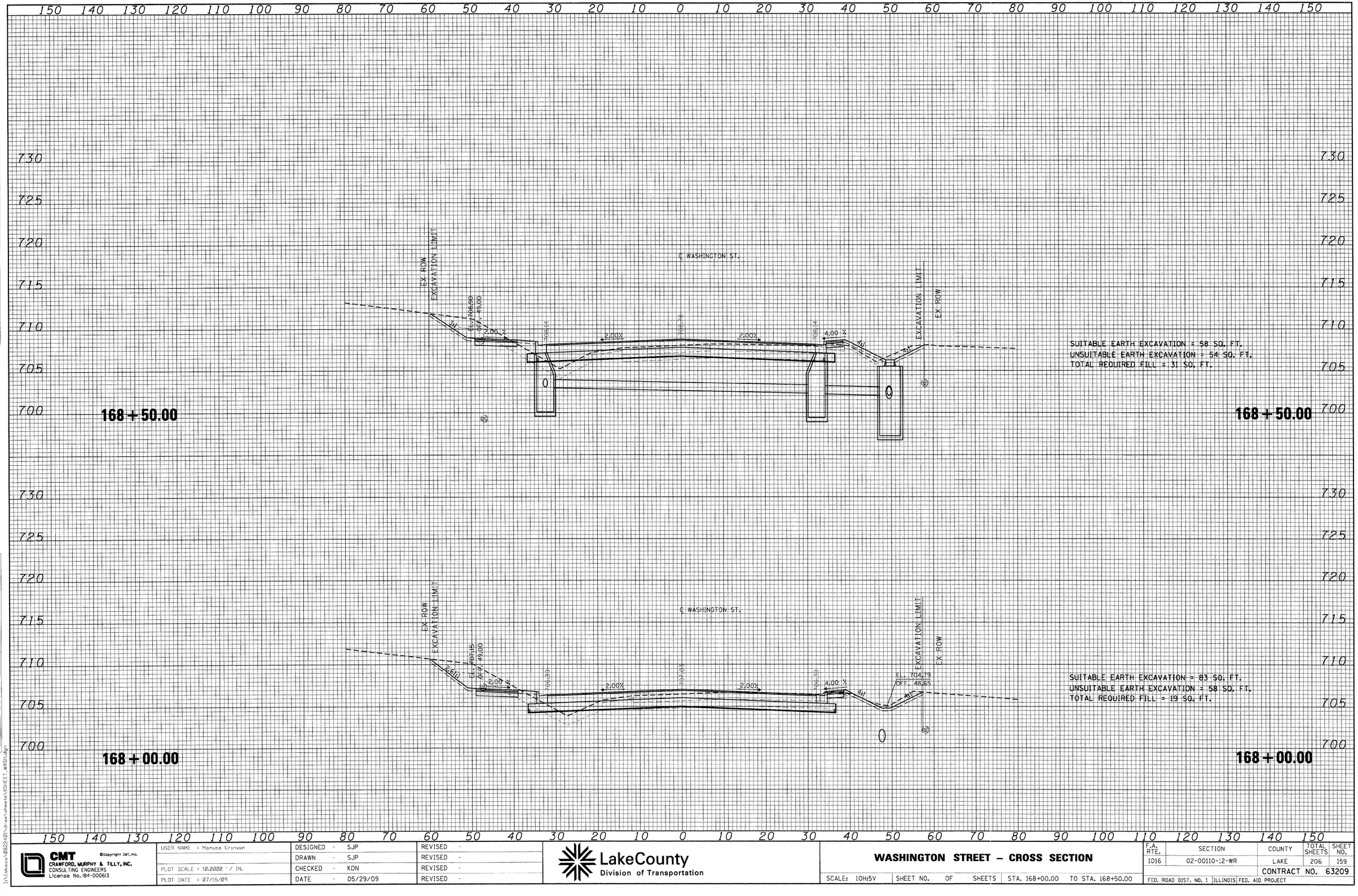
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 167+31.83 TO STA. 167+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	158
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY — SURVEYED — PLOTTED — AREAS CHECKED — BY — DATE

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

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PLOT DATE = 07/15/09

DESIGNED - SJP
DRAWN - SJP
CHECKED - KDN
DATE - 05/29/09

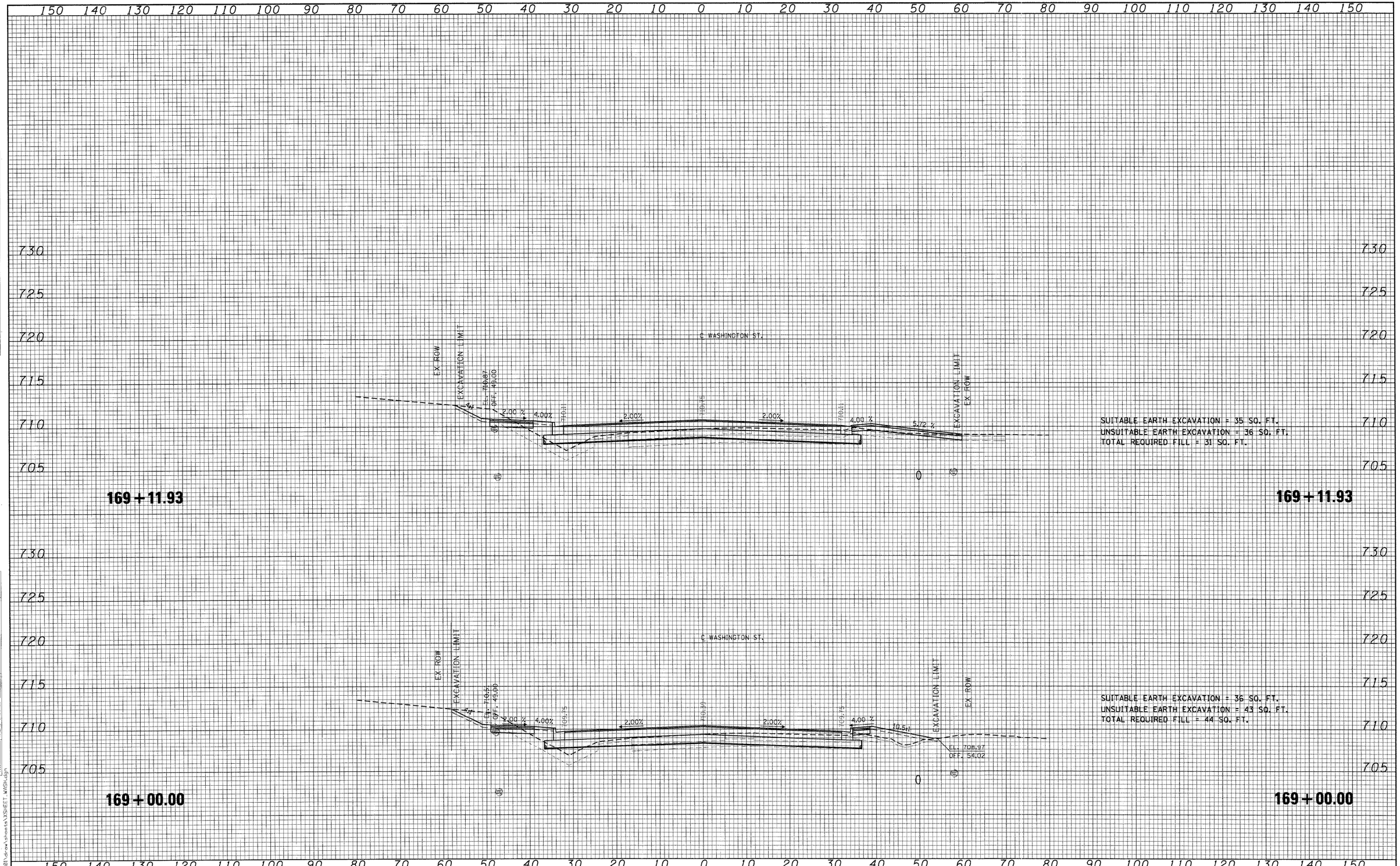
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 168+00.00 TO STA. 168+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	159
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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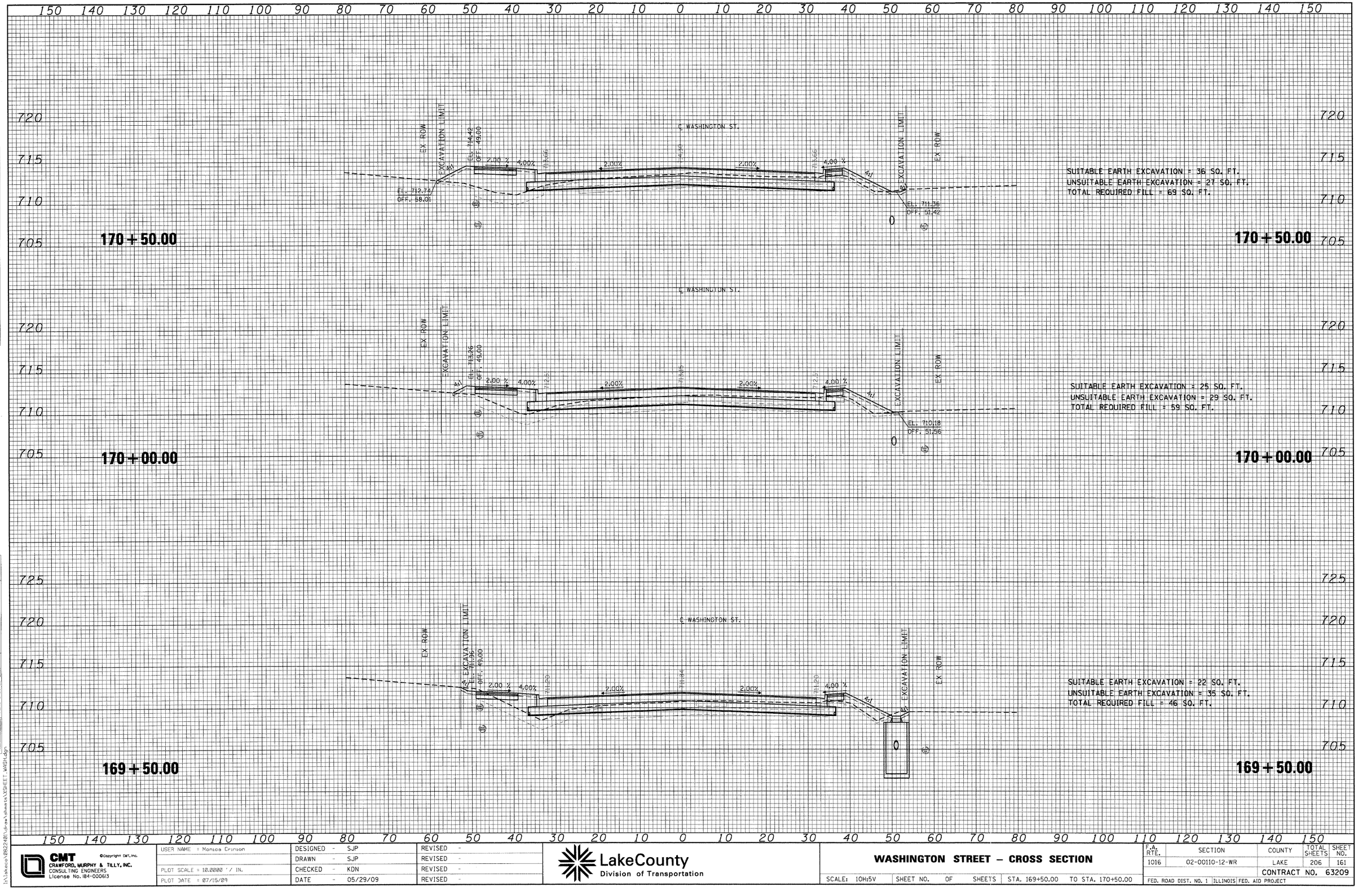
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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 169+00.00 TO STA. 169+11.93

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	160
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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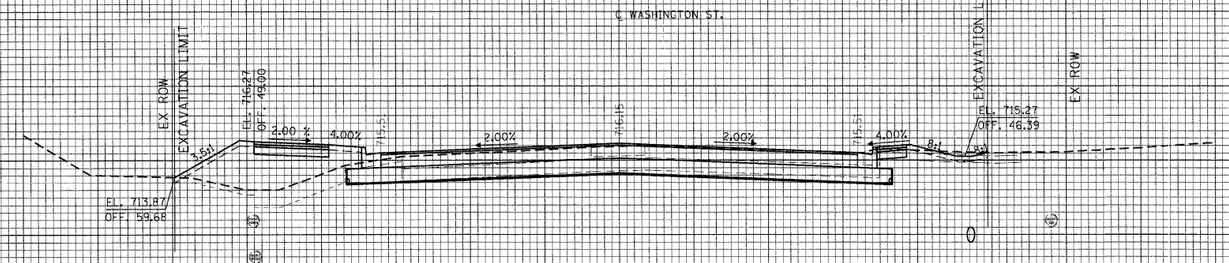
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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -

LakeCounty Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 169+50.00 TO STA. 170+50.00

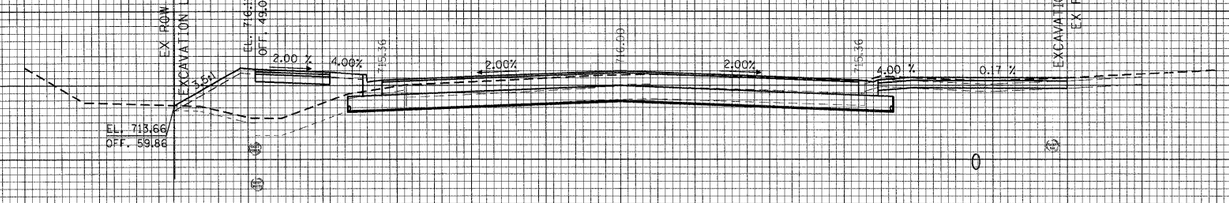
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	161
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



171 + 50.00

SUITABLE EARTH EXCAVATION = 85 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 18 SQ. FT.
TOTAL REQUIRED FILL = 60 SQ. FT.

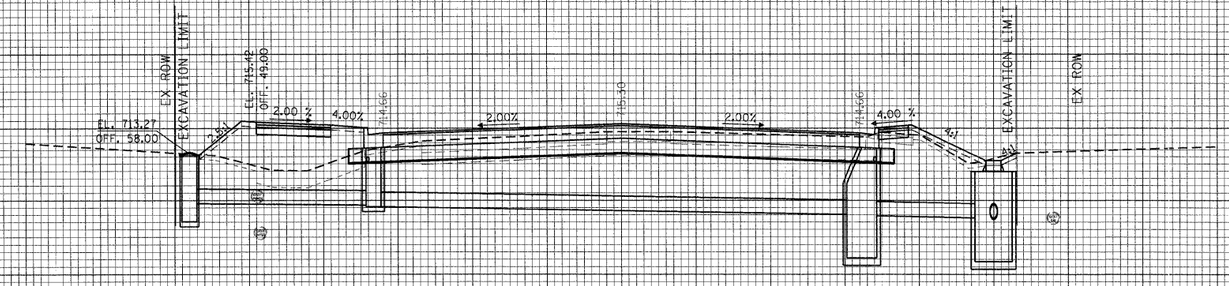
171 + 50.00



171 + 40.17

SUITABLE EARTH EXCAVATION = 88 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 18 SQ. FT.
TOTAL REQUIRED FILL = 61 SQ. FT.

171 + 40.17



171 + 00.00

SUITABLE EARTH EXCAVATION = 56 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 26 SQ. FT.
TOTAL REQUIRED FILL = 71 SQ. FT.

171 + 00.00

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

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

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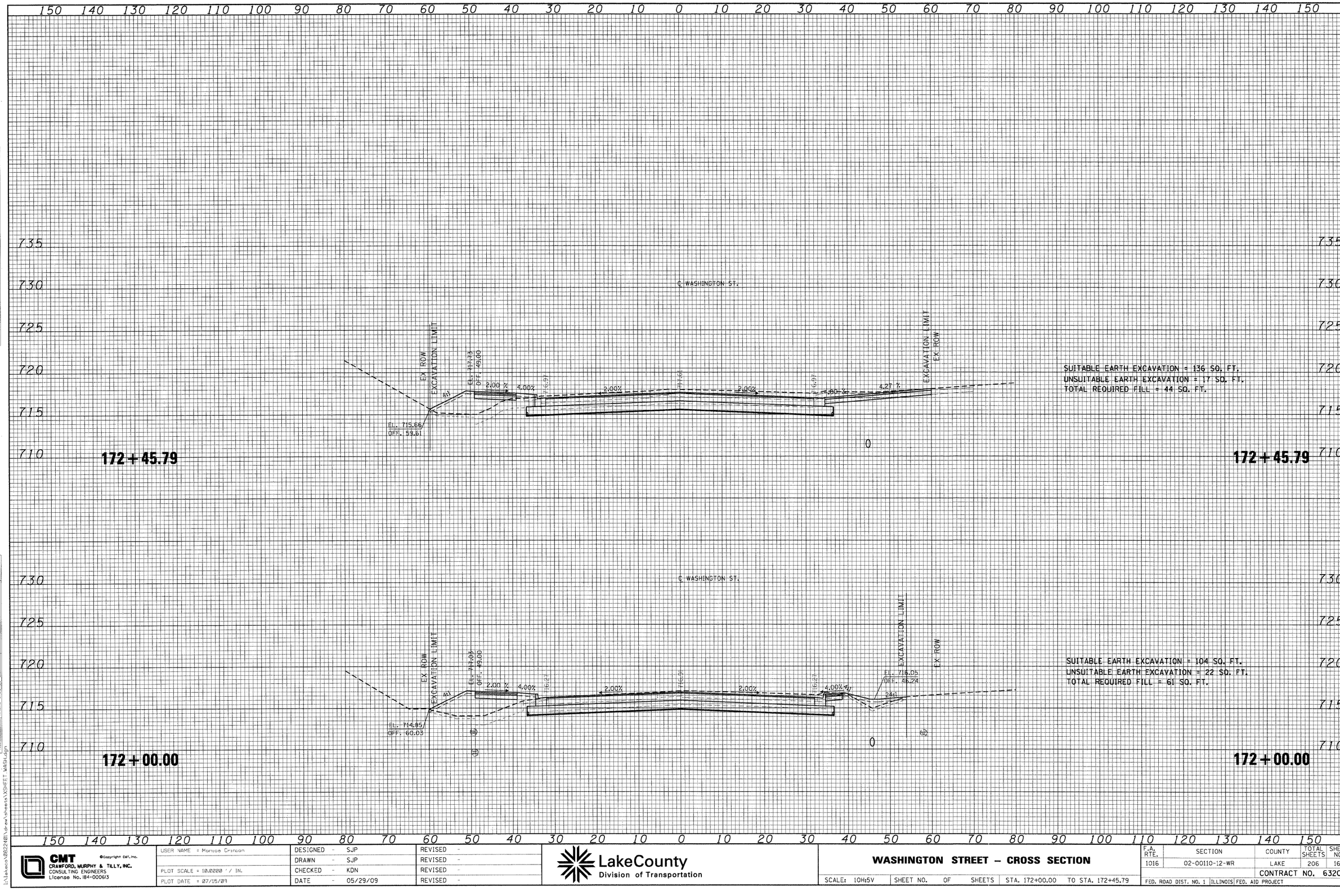
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 171+00.00 TO STA. 171+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	162
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -

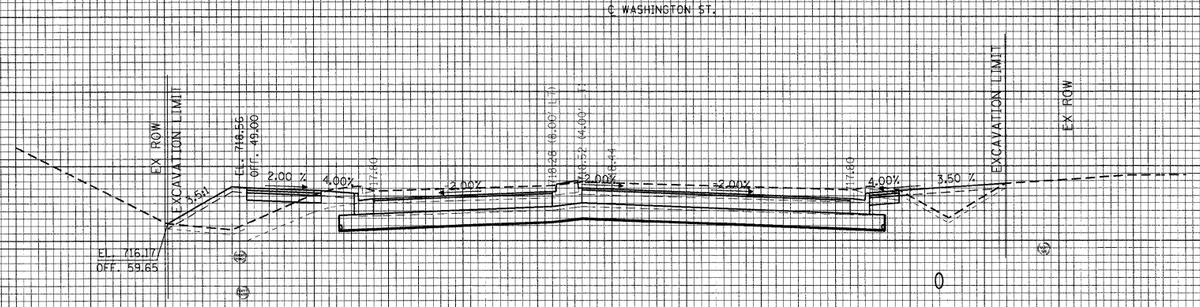
LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 172+00.00 TO STA. 172+45.79

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	163
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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



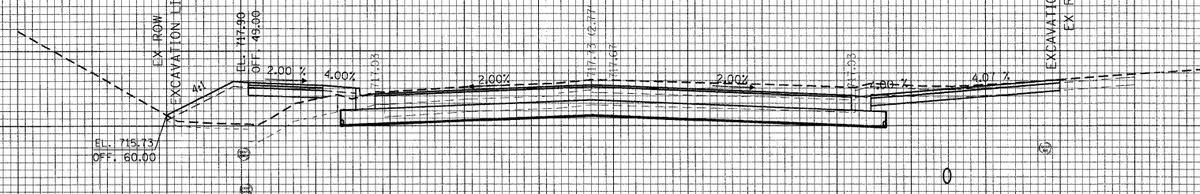
735 730 725 720 715 710

173+00.00

SUITABLE EARTH EXCAVATION = 126 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 26 SQ. FT.
TOTAL REQUIRED FILL = 53 SQ. FT.

173+00.00

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



735 730 725 720 715 710

172+50.00

SUITABLE EARTH EXCAVATION = 129 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 18 SQ. FT.
TOTAL REQUIRED FILL = 48 SQ. FT.

172+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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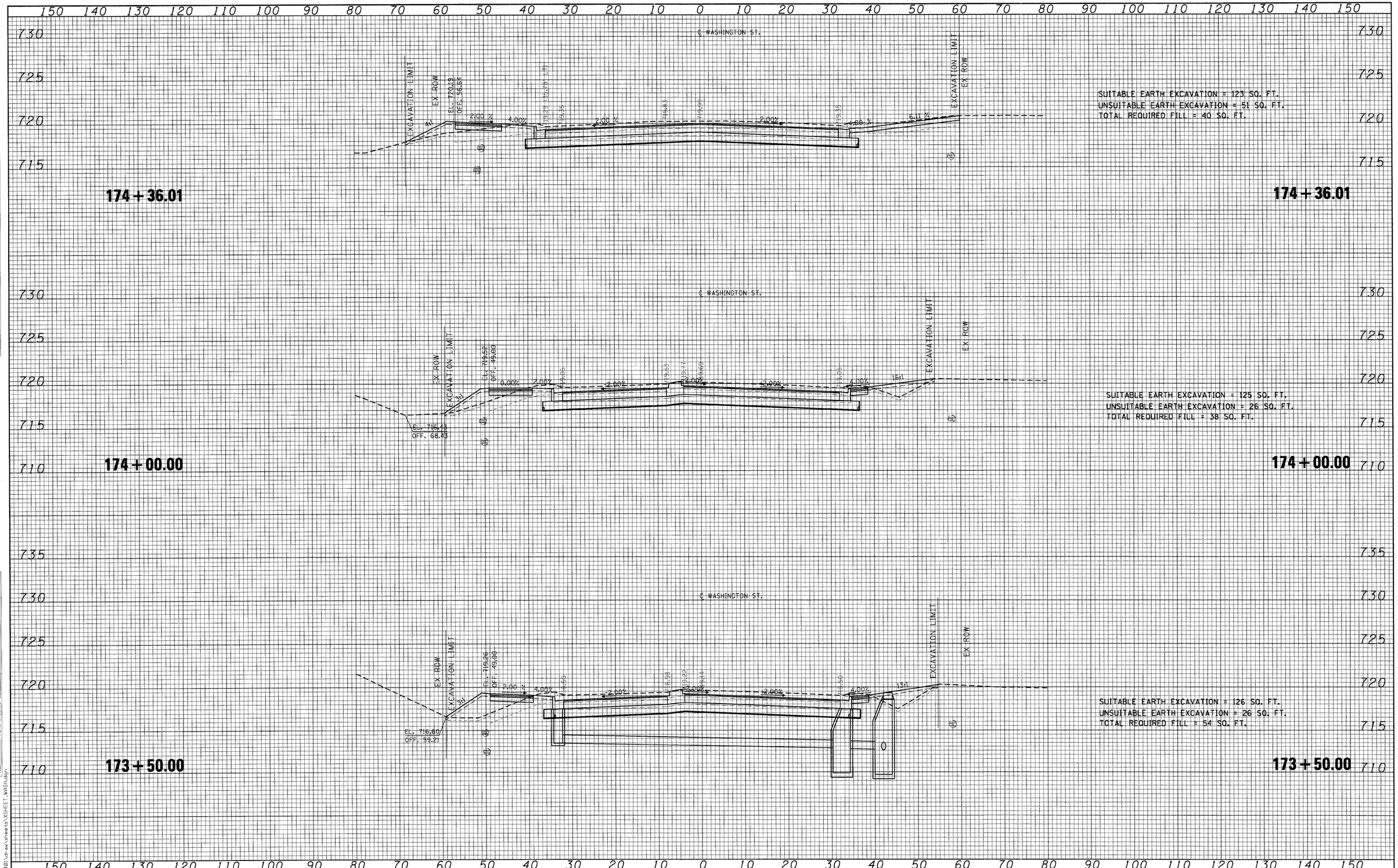
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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 172+50.00 TO STA. 173+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	164
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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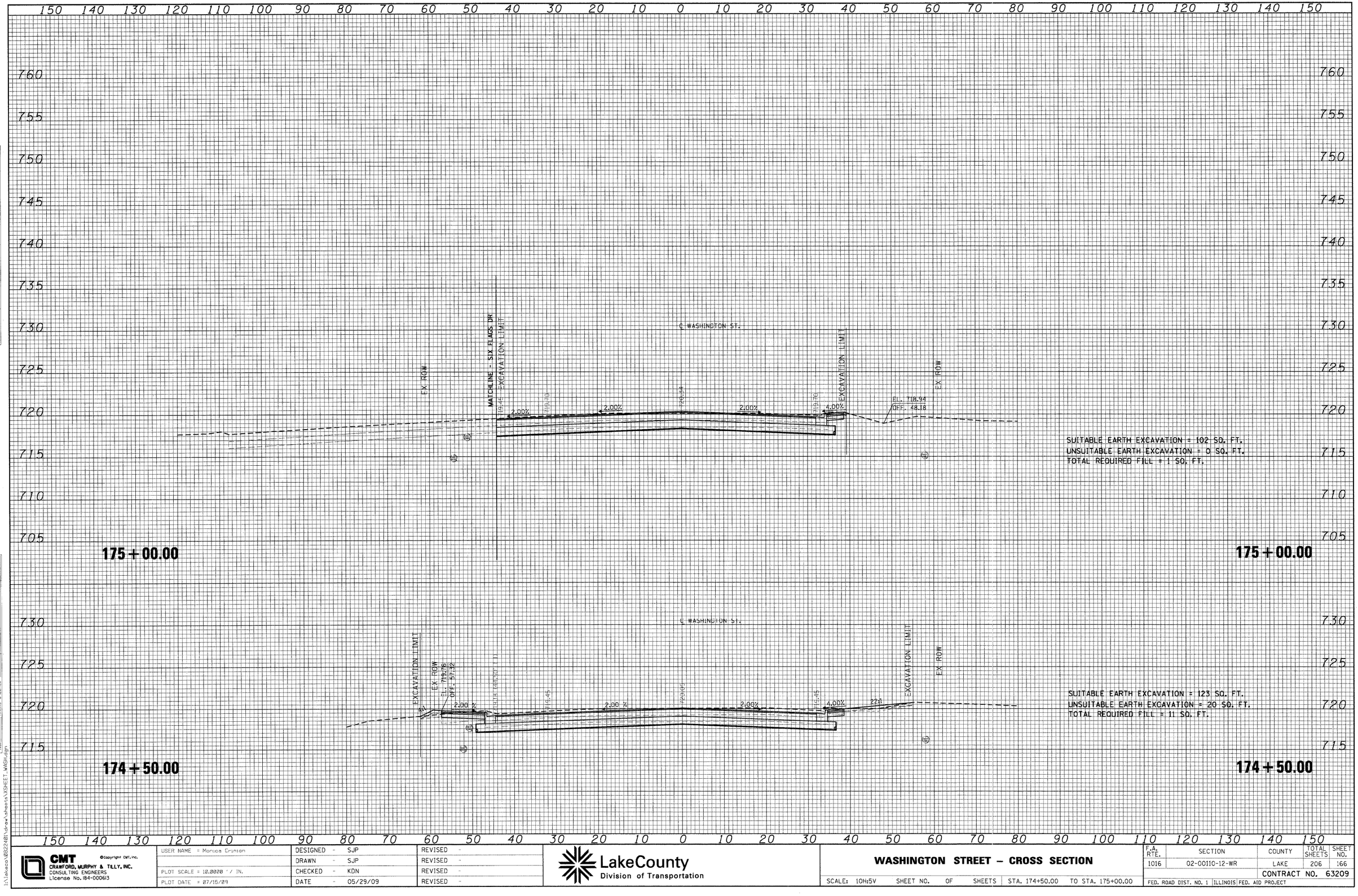
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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -	

LakeCounty Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 173+50.00 TO STA. 174+36.01

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	165
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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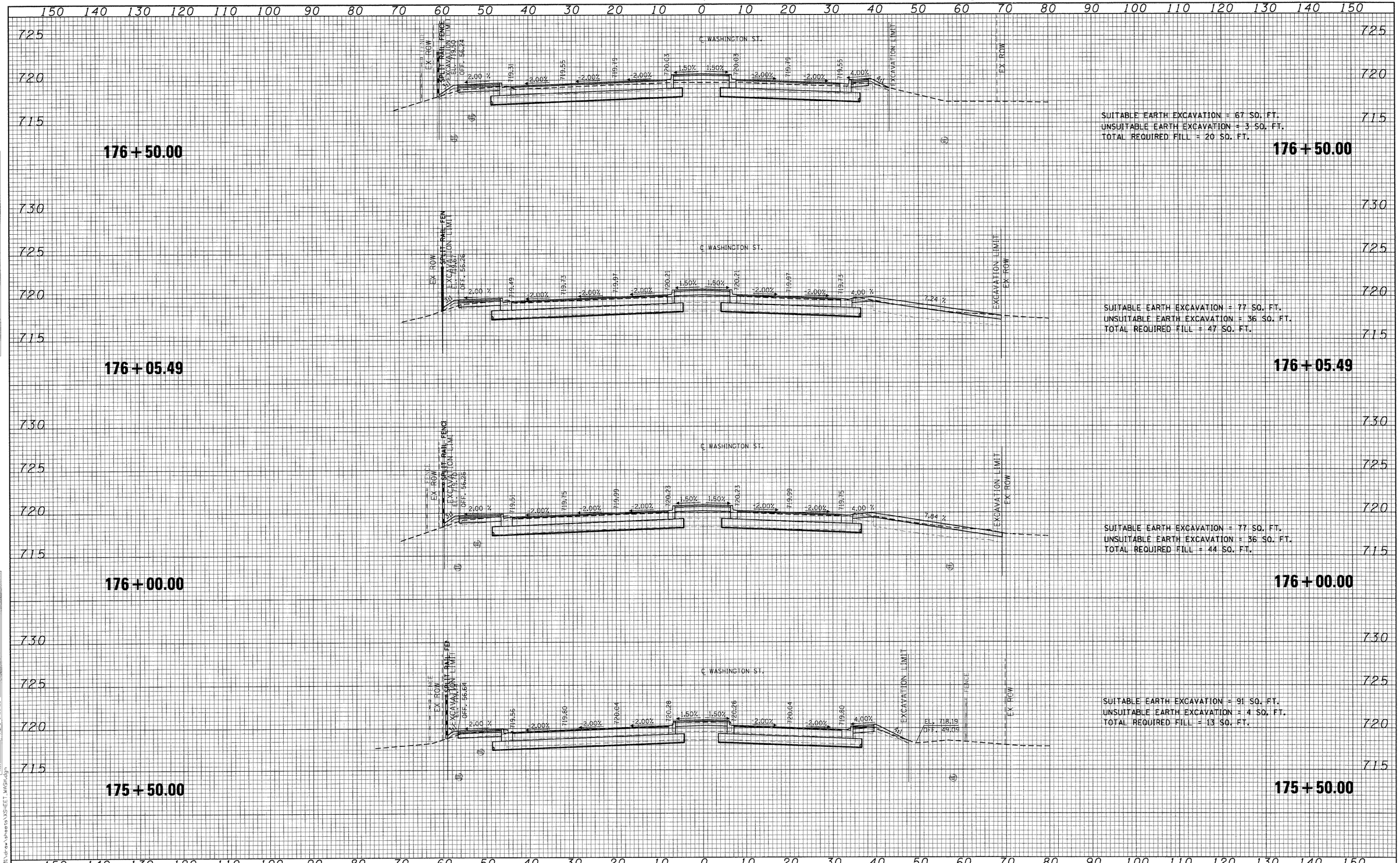
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PLOT DATE = 07/15/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V SHEET NO. OF SHEETS STA. 174+50.00 TO STA. 175+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	166
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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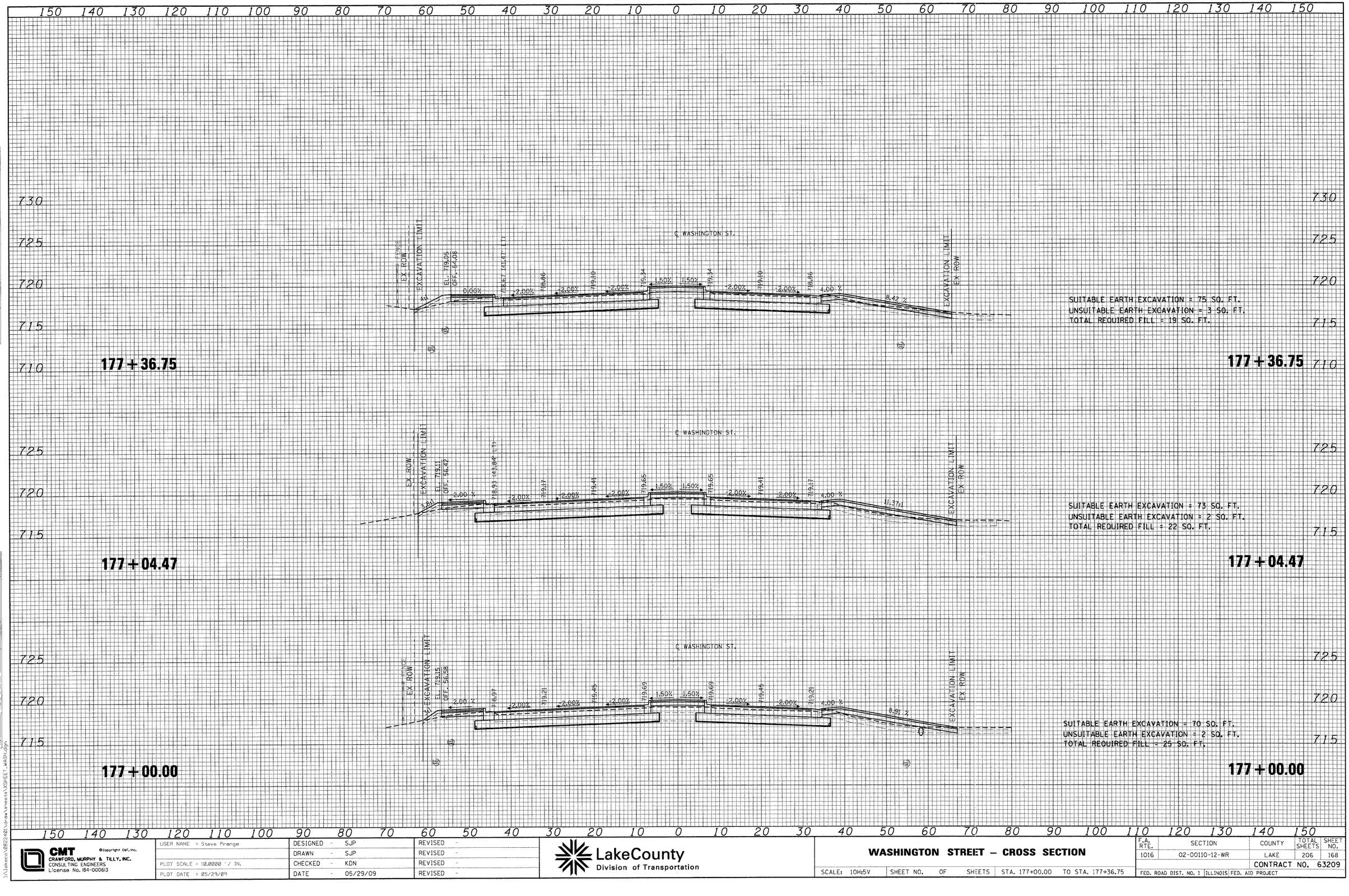
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LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 175+50.00 TO STA. 176+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	167
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

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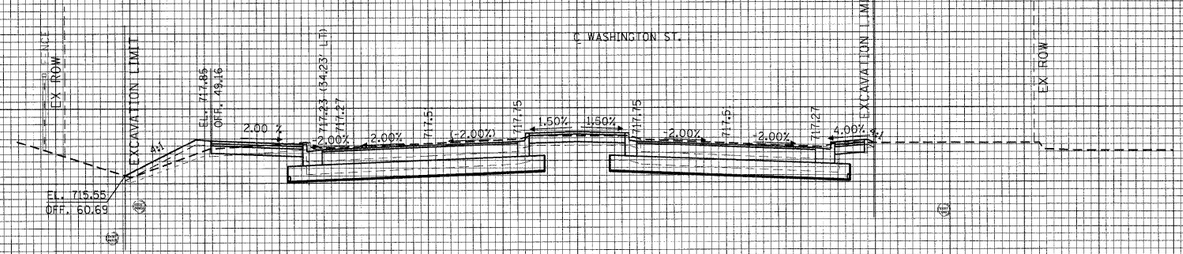
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 177+00.00 TO STA. 177+36.75

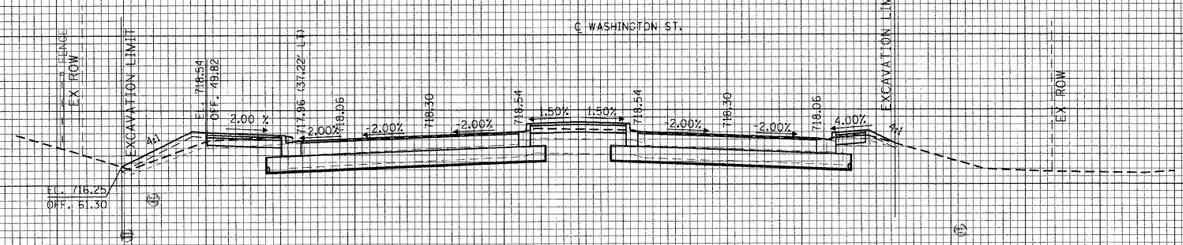
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1016	02-00110-12-WR	LAKE	206	168
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



178 + 50.00

SUITABLE EARTH EXCAVATION = 91 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 4 SQ. FT.
TOTAL REQUIRED FILL = 13 SQ. FT.

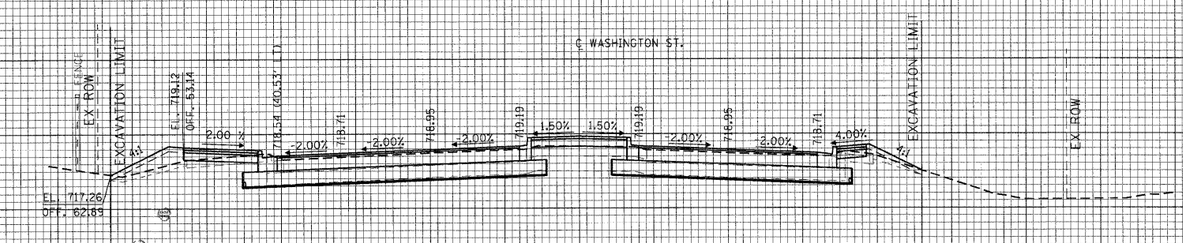
178 + 50.00



178 + 00.00

SUITABLE EARTH EXCAVATION = 81 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 5 SQ. FT.
TOTAL REQUIRED FILL = 17 SQ. FT.

178 + 00.00



177 + 50.00

SUITABLE EARTH EXCAVATION = 72 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 5 SQ. FT.
TOTAL REQUIRED FILL = 24 SQ. FT.

177 + 50.00

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

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

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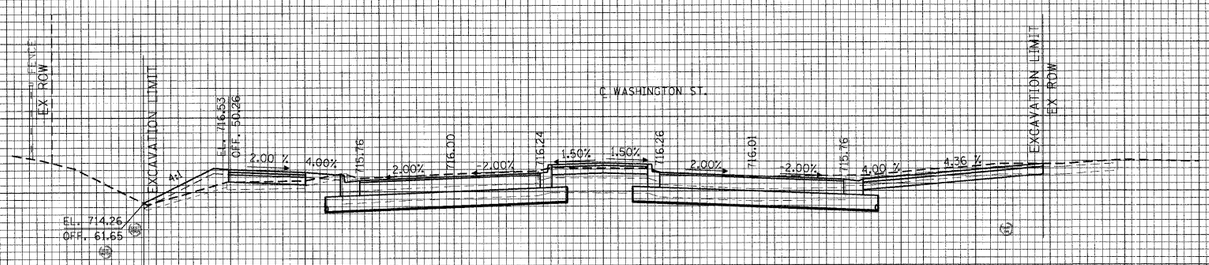
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 177+50.00 TO STA. 178+50.00

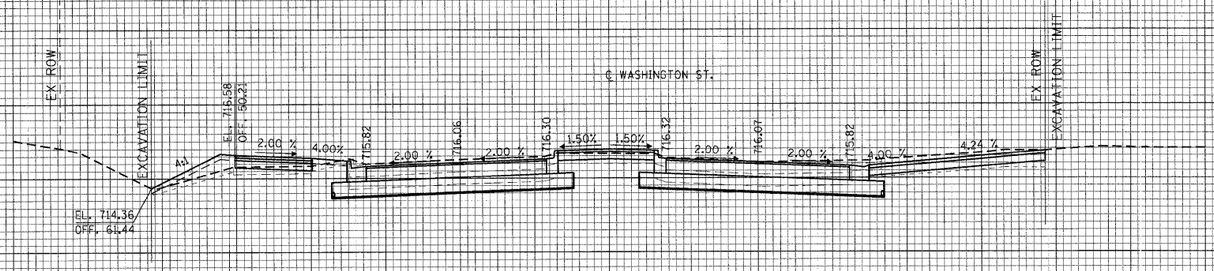
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	169
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



179 + 50.00

SUITABLE EARTH EXCAVATION = 105 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 5 SQ. FT.
TOTAL REQUIRED FILL = 20 SQ. FT.

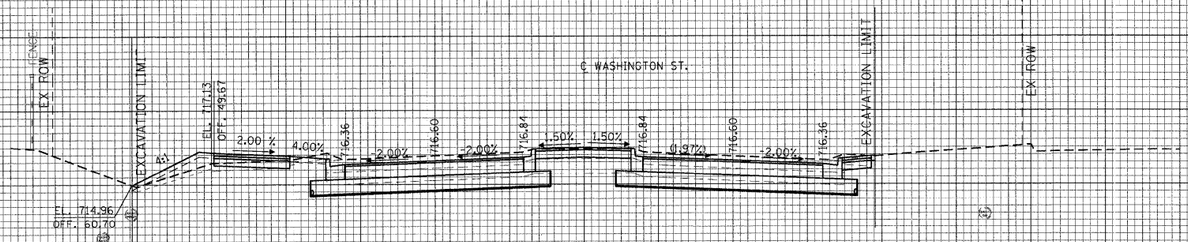
179 + 50.00



179 + 44.60

SUITABLE EARTH EXCAVATION = 91 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 31 SQ. FT.
TOTAL REQUIRED FILL = 24 SQ. FT.

179 + 44.60



179 + 00.00

SUITABLE EARTH EXCAVATION = 100 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 5 SQ. FT.
TOTAL REQUIRED FILL = 13 SQ. FT.

179 + 00.00

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

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

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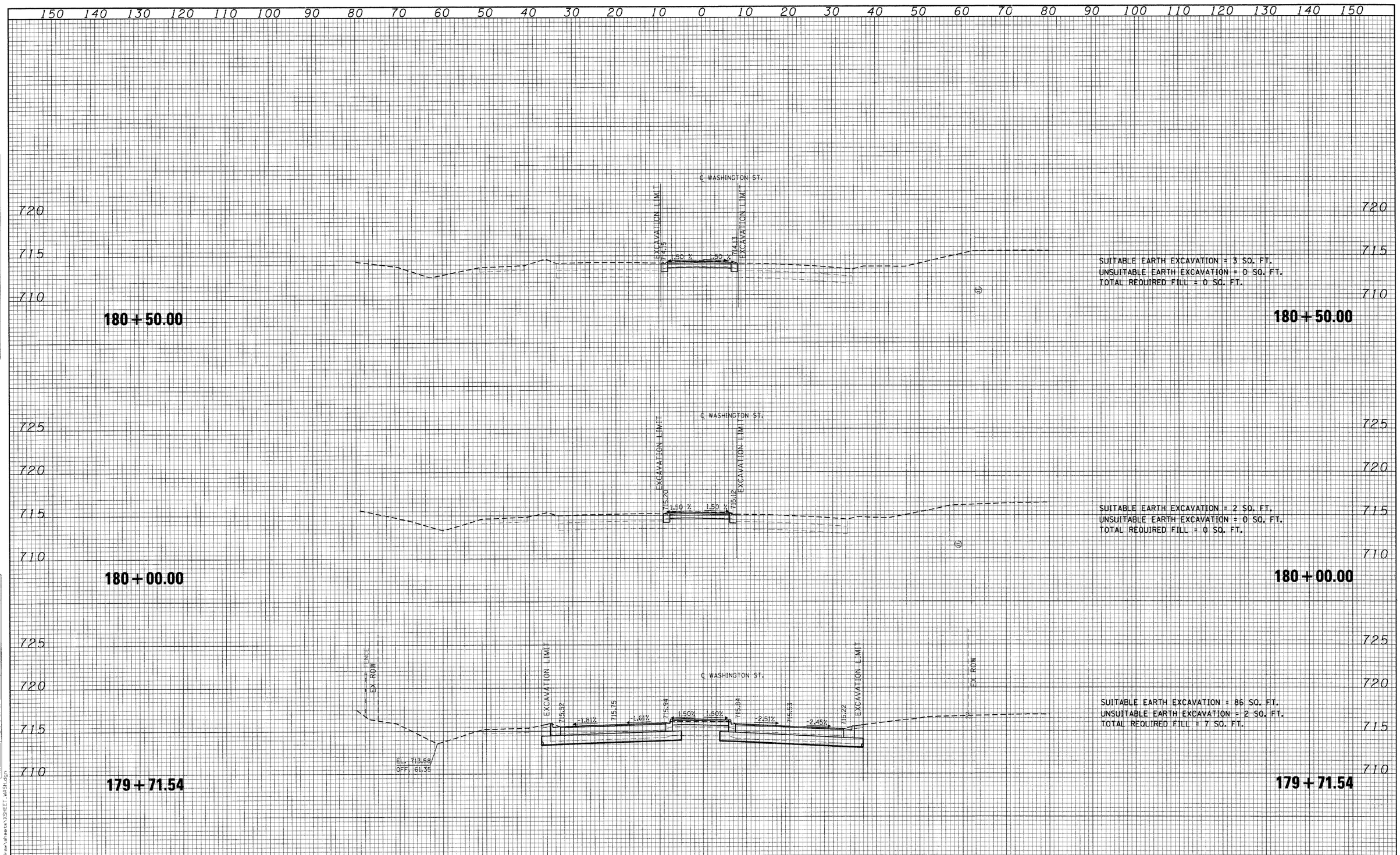
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	DRAWN - SJP	REVISED -	
PLOT SCALE = 10.2000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 179+00.00 TO STA. 179+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	170
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	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

FILE NAME = i:\lakeco\02224\01\dgn\sheets\XSHEET_WASH.dgn

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty — Division of Transportation

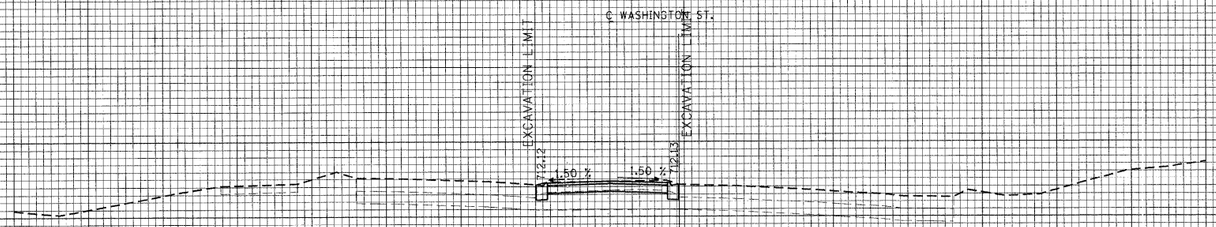
WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 179+71.54 TO STA. 180+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	171
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

720 715 710 705

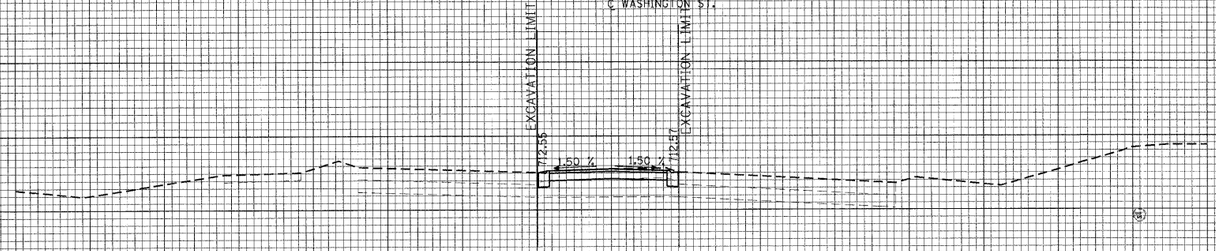


6+53.99

SUITABLE EARTH EXCAVATION = 3 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 0 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

6+53.99

725 720 715 710 705

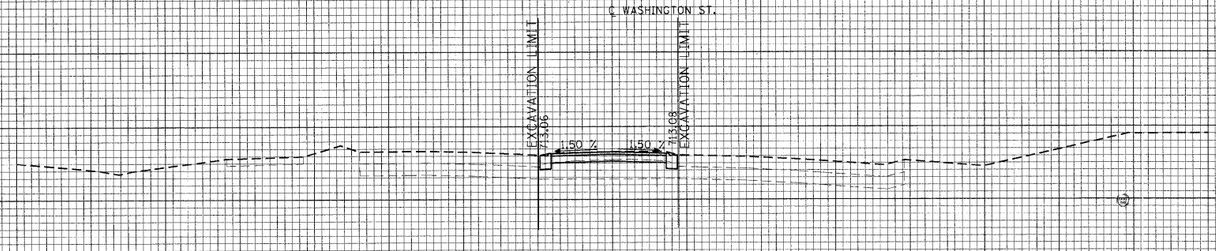


181+23.08

SUITABLE EARTH EXCAVATION = 2 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 0 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

181+23.08

720 715 710 705



181+00.00

SUITABLE EARTH EXCAVATION = 3 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 0 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

181+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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PLOT DATE = 05/29/09

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CHECKED - KDN		REVISED -
DATE - 05/29/09		REVISED -

LakeCounty
Division of Transportation

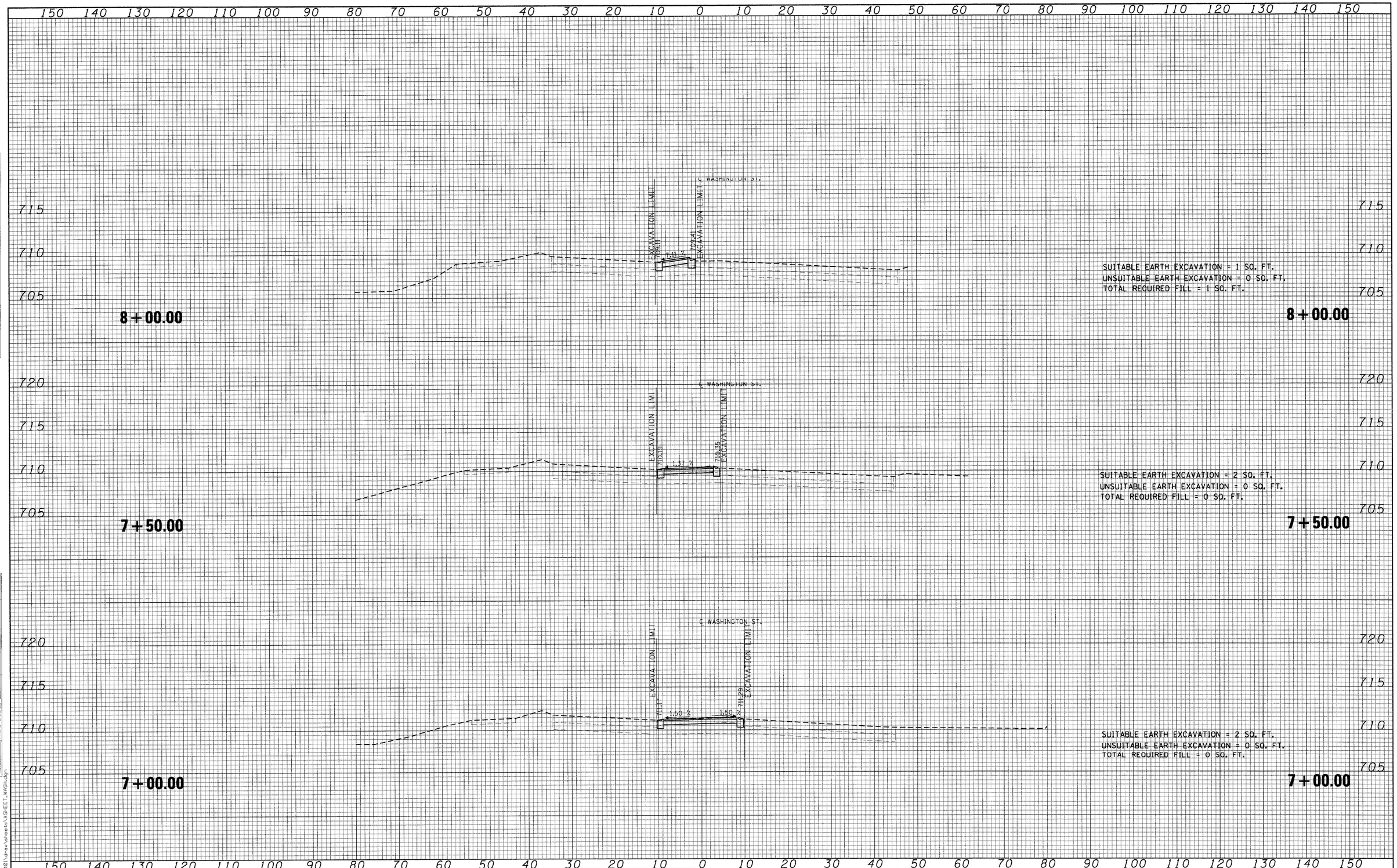
WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 181+00.00 TO STA. 6+53.99

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	172

CONTRACT NO. 63209

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



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

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

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	DRAWN - SJP	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 7+00.00 | TO STA. 8+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	173
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

715

710

705

EXCAVATION LIMIT

EXCAVATION LIMIT

℄ WASHINGTON ST.

℄ 708.78

708.99

SUITABLE EARTH EXCAVATION = 1 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 0 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

8+33.55

715

710

705

8+33.55

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

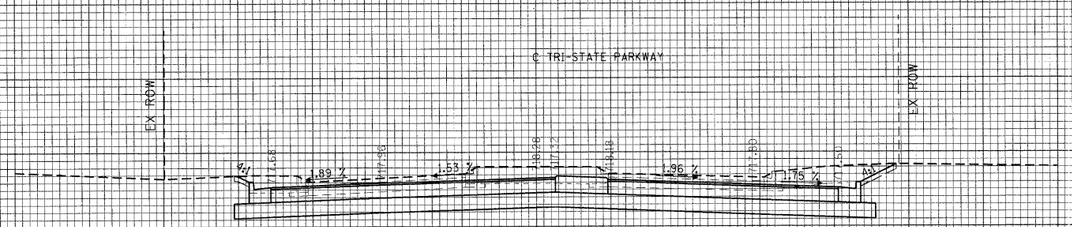
LakeCounty
Division of Transportation

WASHINGTON STREET – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 8+33.55 | TO STA. 8+33.55

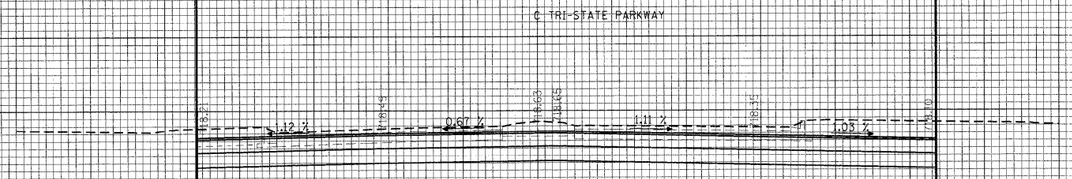
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	174
		CONTRACT NO. 63209		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



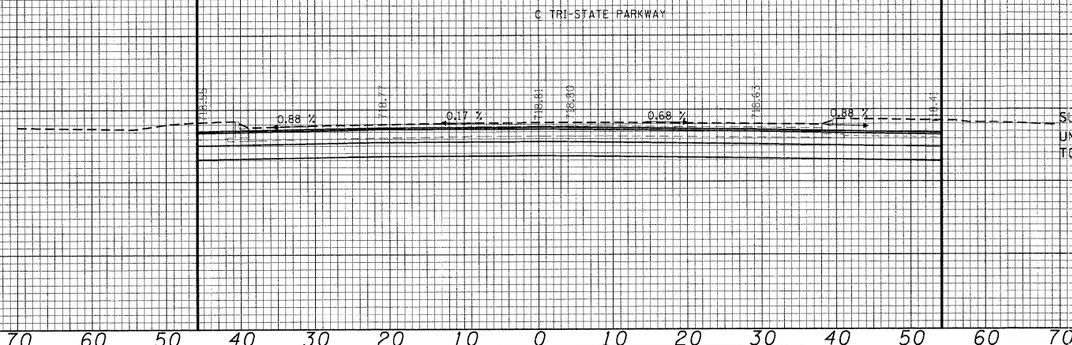
15 + 65.50

SUITABLE EARTH EXCAVATION = 144 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 44 SQ. FT.
TOTAL REQUIRED FILL = 5 SQ. FT.



15 + 50.00

SUITABLE EARTH EXCAVATION = 158 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 31 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.



15 + 42.00

SUITABLE EARTH EXCAVATION = 144 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 22 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

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

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

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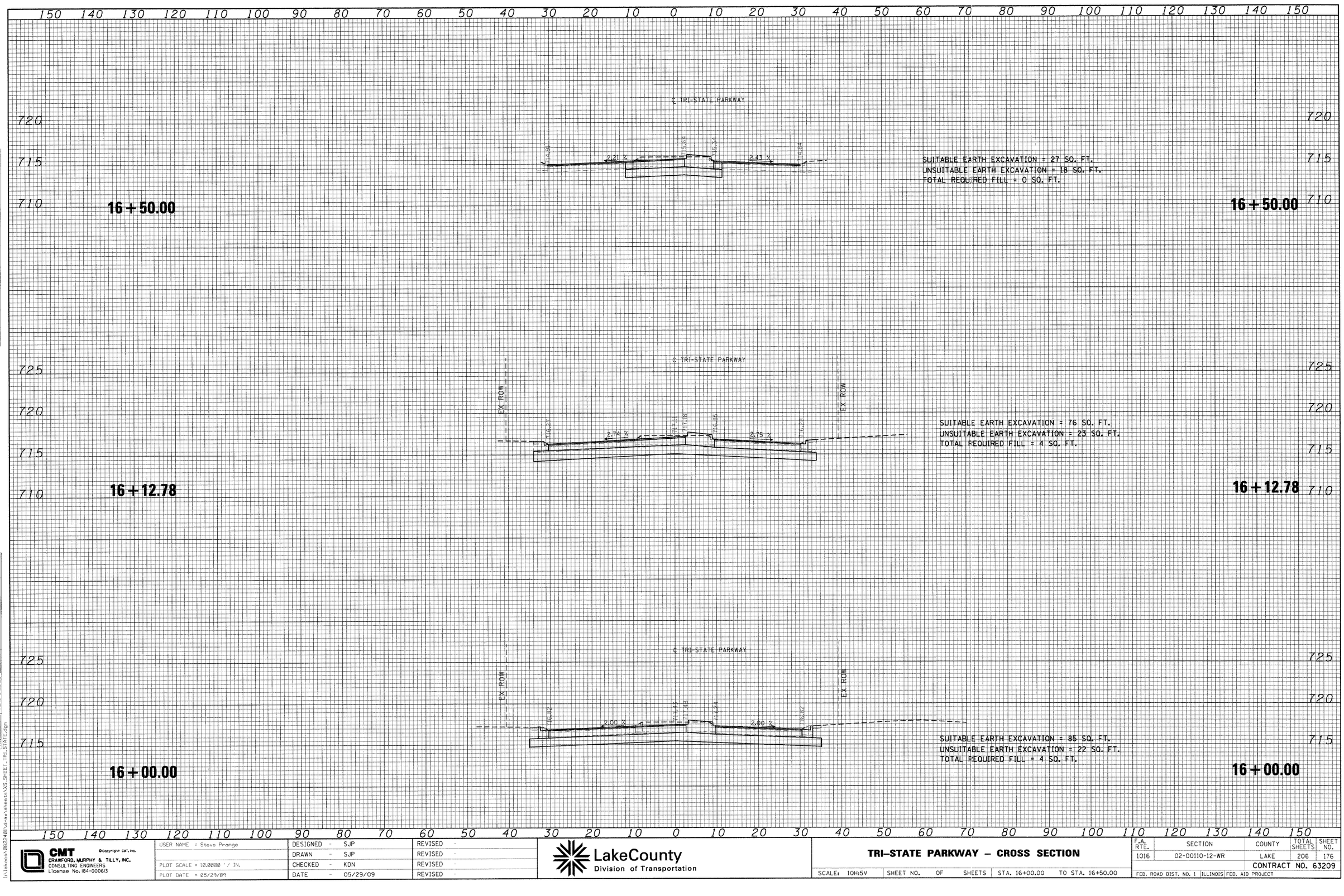
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

TRI-STATE PARKWAY – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 15+42.00 TO STA. 15+65.50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	175
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

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

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PLOT DATE = 05/29/09	DATE - 05/29/09		REVISED -

LakeCounty
Division of Transportation

TRI-STATE PARKWAY – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 16+00.00 TO STA. 16+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	176
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

710
705

18+00.00

℄ TRI-STATE PARKWAY



SUITABLE EARTH EXCAVATION = 25 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 0 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

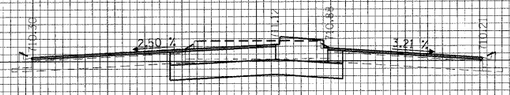
710
705

18+00.00

715
710
705

17+50.00

℄ TRI-STATE PARKWAY



SUITABLE EARTH EXCAVATION = 27 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 18 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

715
710
705

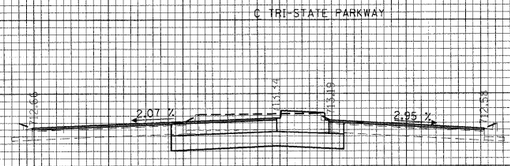
17+50.00

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

715
710

17+00.00

℄ TRI-STATE PARKWAY



SUITABLE EARTH EXCAVATION = 28 SQ. FT.
UNSUITABLE EARTH EXCAVATION = 18 SQ. FT.
TOTAL REQUIRED FILL = 0 SQ. FT.

715
710

17+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

TRI-STATE PARKWAY – CROSS SECTION

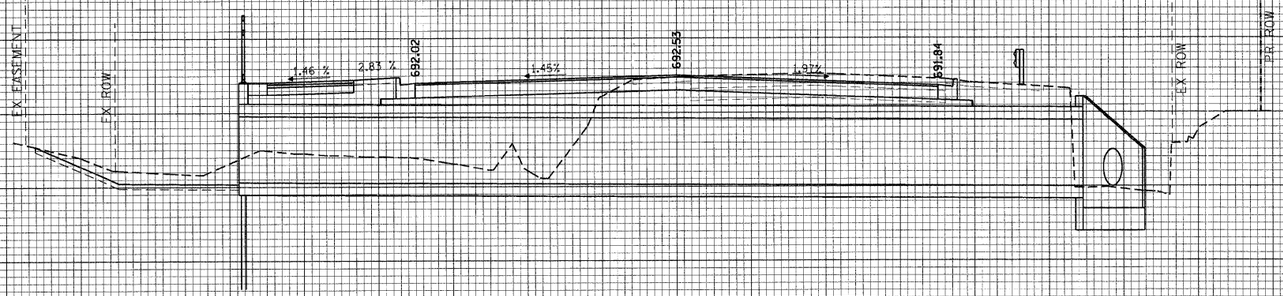
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 17+00.00 TO STA. 18+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	177
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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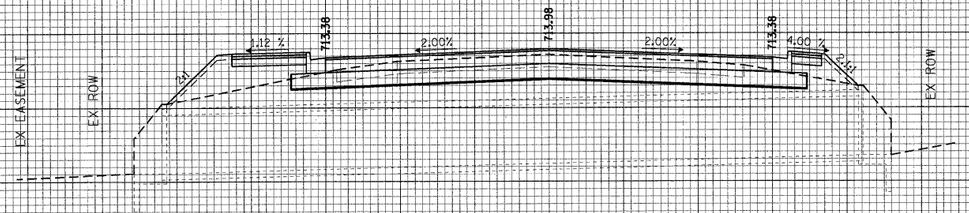
710
705
700
695
690
685
680



156 + 74.05

156 + 74.05

730
725
720
715
710
705



137 + 18.90

137 + 18.90

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

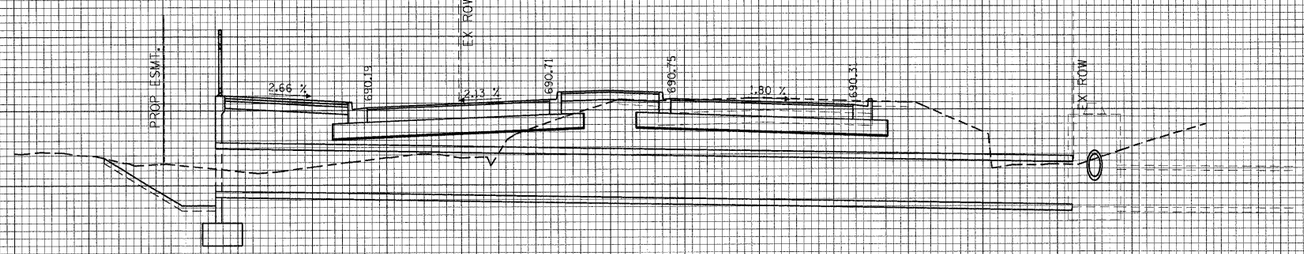
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	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

CULVERT – CROSS SECTION

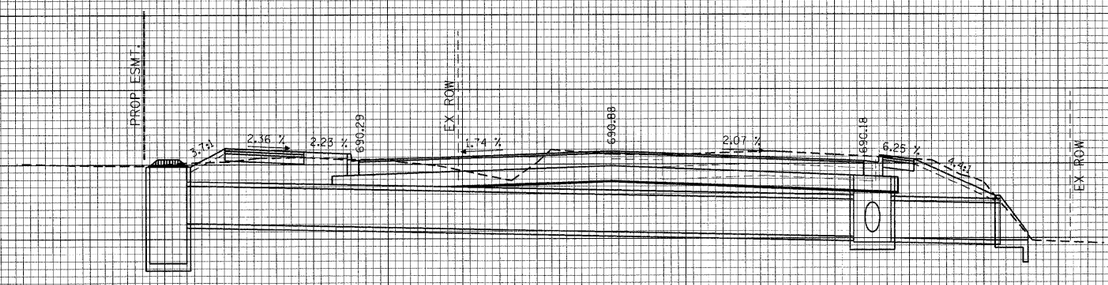
SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 137+18.90 TO STA. 156+74.05

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	178
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



162 + 64.22

162 + 64.22



160 + 04.86

160 + 04.86

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

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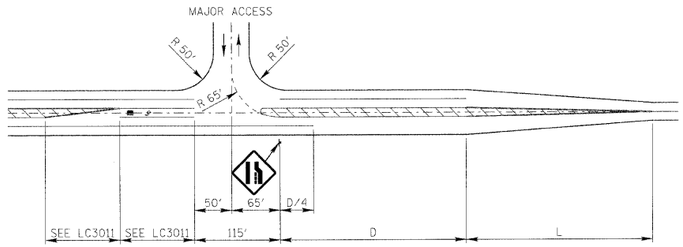
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PLOT SCALE = 10.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

CULVERT – CROSS SECTION

SCALE: 10H:5V | SHEET NO. OF SHEETS | STA. 160+04.86 TO STA. 162+64.22

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	179
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



DESIGN SPEED MPH	LANE DROP (L) IN FEET: LANE REDUCTION LENGTH (= SPEED x LANE WIDTH) 11' LANES	12' LANES	D (FEET)
30	330'	360'	325' [1]
35	385'	420'	400' [1]
40	440'	480'	475' [1]
45	495'	540'	550' [1]
50	550'	600'	625' [1]
55	605'	660	700' [1]

DESIGN NOTE:
A. FOR DESIGN ONLY - DO NOT INCLUDE IN PLAN SETS

REFERENCE:
1. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MILLENNIUM EDITION (USDOT-FHWA) pg. 2C-6-7, Table 2C-4.

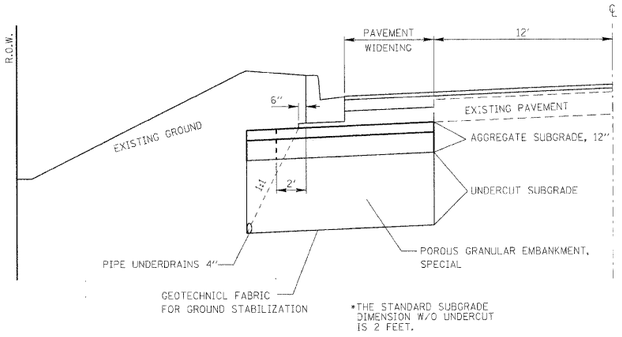
REVISIONS	DATE

LakeCounty Division of Transportation

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

5 LANE TO 2 LANE DROP OR ADD

LC0023



IN UNSTABLE AREAS, THE SUBGRADE SHALL BE:
UNDERCUT (PAID FOR AS EARTH EXCAVATION PER CU YD);
REINFORCED WITH GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (PAID FOR PER SQ YD);
DRAINED BY INSTALLATION OF PIPE UNDERDRAINS, 4" (PAID FOR PER FOOT);
BACKFILLED WITH POROUS GRANULAR EMBANKMENT, SPECIAL (PAID FOR PER TON) AND;
TOPPED WITH AGGREGATE SUBGRADE, 12" (300mm) (PAID FOR PER SQ YD).

SCALE:
HORIZONTAL 1" = 5'
VERTICAL 1" = 2.5'

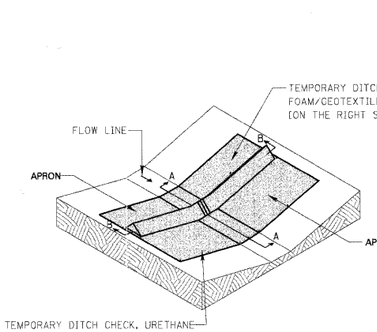
REVISIONS	DATE

LakeCounty Division of Transportation

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

UNDERCUT DETAIL

LC3000



SILT DIKE UNIT ISOMETRIC

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.

NOTE:
THE INSTALLATION SHOWN ABOVE WILL BE MEASURED AS TWO (2) EACH TEMPORARY DITCH CHECK, URETHANE FOAM/GEOTEXTILE.

SCALE: 1" = 5'

REVISIONS	DATE

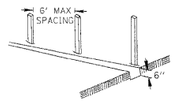
LakeCounty Division of Transportation

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

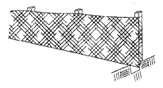
TRIANGULAR SILT DIKE INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH

LC3010

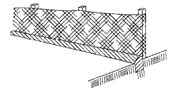
1. SET POSTS AND EXCAVATE OR SLIT-TRENCH A 6-INCH DEEP TRENCH UPSLOPE ALONG THE LINE OF POSTS



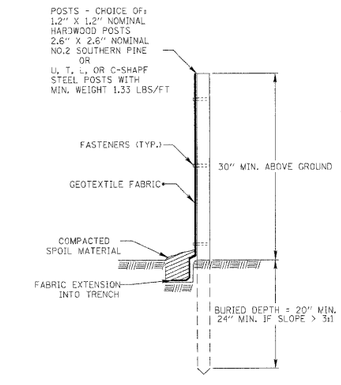
2. ATTACH GEOTEXTILE FILTER FABRIC TO EACH POST WITH A MINIMUM OF 3 (THREE) FASTENERS PER POST AND EXTEND FABRIC TO THE BOTTOM OF THE TRENCH



3. BACKFILL AND COMPACT THE EXCAVATED MATERIALS



Requirements	Test Methods	Wire Backed Supported Silt Fence [1]	Unsupported Silt Fence: Geotextile Elongation >50% [2] 4 feet	Geotextile Elongation <50% [2] 8 feet
Maximum Post Spacing		4 feet	4 feet	8 feet
Grab Strength	ASTM D 4632			
Machine direction		90 lbs	124 lbs	124 lbs
X-Machine direction		90 lbs	100 lbs	100lbs
Permittivity [3]	ASTM D 4491	0.05 sec $^{-1}$	0.05 sec $^{-1}$	0.05 sec $^{-1}$
Apparent Opening Size	ASTM D 4751	0.024in maximum average roll value		
Ultraviolet stability (retained strength)	ASTM D 4355	70% after 500 hours of exposure		



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

SCALE 1" = 1'

REVISIONS	DATE
ORIG. by LCSMC	04/21/08

LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: JUNE 20, 2008

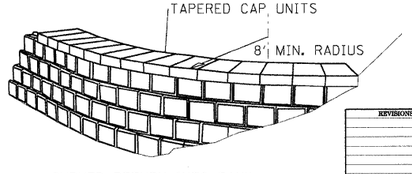
PERIMETER EROSION BARRIER INSTALLATION

LC3021

1. BLOCK FACING IS SPLIT FACE
2. CAP UNITS TO BE APPLIED WITH ADHESIVE. APPLICATION RATE IS ONE 10.5 OZ TUBE PER 18 FEET OF CAP LENGTH.
3. PLACEMENT METHOD IS BY HAND
4. STACKING ALIGNMENT MAY BE EITHER BATTERED OR VERTICAL
5. MINIMUM FACE RADIUS IN CURVE = 8'
6. DESIGN NOTE: MAX HEIGHT GRAVITY ONLY = 3 FEET
7. RETAINING WALL BLOCKS MUST BE CERTIFIED BY IDOT'S QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

SEGMENTAL CONCRETE BLOCK DETAILS

	FACE WIDTH	BACK WIDTH	HEIGHT	DEPTH	WEIGHT
STANDARD UNIT	8"	8"	6"	12"	45 LBS
TAPERED UNIT	8"	6⅞"	6"	12"	43 LBS
TAPERED CAP	8"	7"	3"	14"	22 LBS
RECTANGULAR CAP	24"	24"	3"	12"	68 LBS



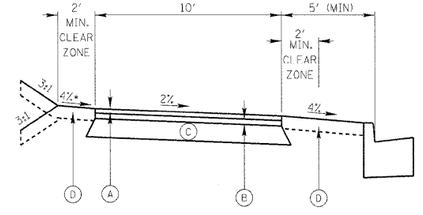
REVISIONS	DATE

LakeCounty Division of Transportation

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

SEGMENTAL CONCRETE BLOCK WALL

LC3011



(A) 2 " HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50

(B) 2 " HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

(C) AGGREGATE BASE COURSE, TYPE A, 6"

(D) FURNISHING AND PLACING TOPSOIL, 4", and SEEDING, CLASS 2A or SODDING

DESIGN NOTE:
•Slope away from road in fill sections
Slope toward road in cut sections

SCALE:
VERTICAL 1" = 2'
HORIZONTAL 1" = 4'

REVISIONS	DATE

LakeCounty Division of Transportation

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

TYPICAL SECTION 10' BIT. BIKEPATH IN VICINITY OF CURB & GUTTER

LC4064

FILE NAME = I:\lakeco\0822401\dgn\sheets\STD_01.dgn

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USER NAME = Steve Prange
PLOT SCALE = 20.0000 ' / IN.
PLOT DATE = 05/29/09

DESIGNED - SJP
DRAWN - SJP
CHECKED - KDN
DATE - 05/29/09

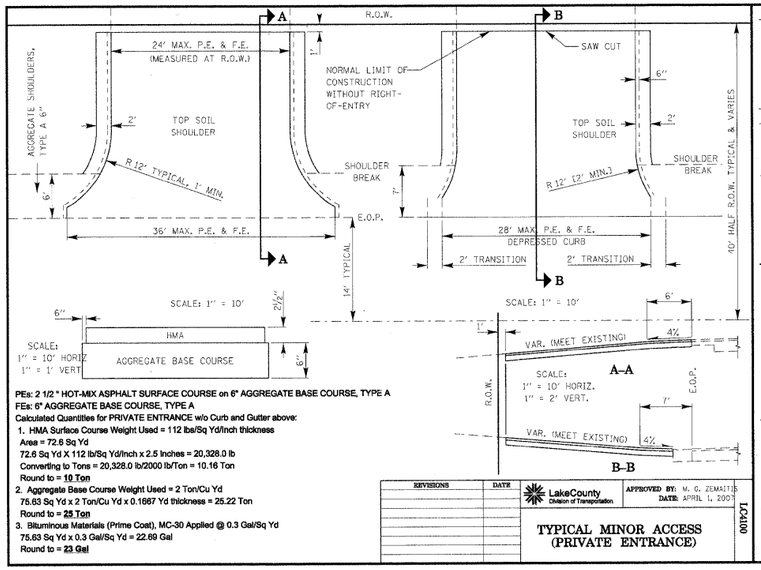
REVISED -
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REVISED -

LakeCounty Division of Transportation

L.C.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 1 OF 5 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	180
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



PEs: 2 1/2 " HOT-MIX ASPHALT SURFACE COURSE on 6" AGGREGATE BASE COURSE, TYPE A
FEs: 6" AGGREGATE BASE COURSE, TYPE A
Calculated Quantities for PRIVATE ENTRANCE w/o Curb and Gutter above:

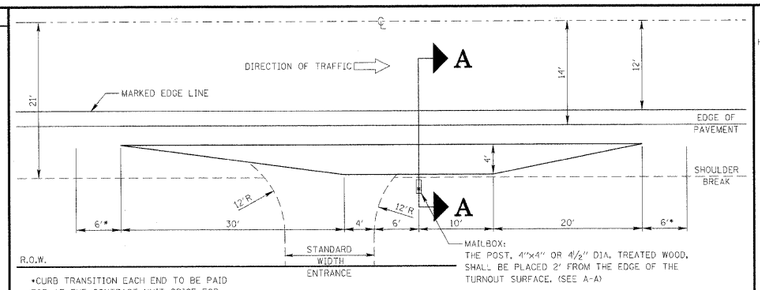
1. **HMA Surface Course Weight Used = 112 lbs/Sq Yd/Inch thickness**
   Area = 72.6 Sq Yd
   72.6 Sq Yd X 112 lb/Sq Yd/Inch x 2.5 Inches = 20,328.0 lb
   Converting to Tons = 20,328.0 lb/2000 lb/Ton = 10.16 Ton
   Round to = 10 Ton
2. **Aggregate Base Course Weight Used = 2 Ton/Cu Yd**
   75.63 Sq Yd x 2 Ton/Cu Yd x 0.1667 Yd thickness = 25.22 Ton
   Round to = 25 Ton
3. **Bituminous Materials (Prime Coat), MC-30 Applied @ 0.3 Gal/Sq Yd**
   75.63 Sq Yd x 0.3 Gal/Sq Yd = 22.69 Gal
   Round to = 23 Gal

REVISIONS	DATE

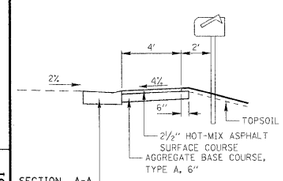
LakeCounty Division of Transportation — APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007

TYPICAL MINOR ACCESS (PRIVATE ENTRANCE)

LC4100



*CURB TRANSITION EACH END TO BE PAID FOR AT THE CONTRACT UNIT PRICE FOR COMBINATION CONCRETE CURB AND CUTTER, TYPE B-6.24.



SECTION A-A
SCALE: 1" = 5'

DESIGN NOTES:

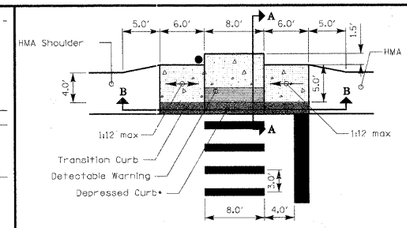
1. The Resident Engineer shall contact the local postmaster prior to installing the new mailbox posts for the local mounting height of the mailbox. The standard mounting height is 3½'; however, local post- masters may vary this height.
2. The standard mailbox post is a 4"x4" or a 4½" dia. treated wood post. The standard bury length of the post is 2'. Do not shorten or exceed this bury length.
3. Depending on the location of the shoulder break with respect to the edge of the mailbox turnout the overall post length may vary from 5' 8" to 6' 4" to maintain the 2' bury length and the 3½' mounting height.

REVISIONS	DATE

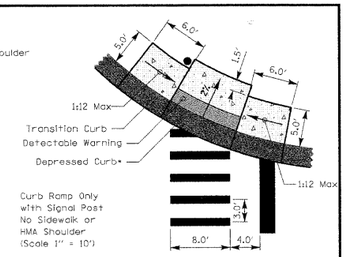
LakeCounty Division of Transportation — APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007

MAILBOX TURNOUT ALONG CURBED ROADS

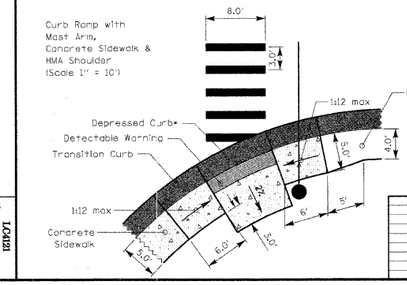
LC4121



Curb Ramp with Signal Post & Transitions to HMA Shoulders (Scale 1" = 10')



Curb Ramp Only with Signal Post No Sidewalk or HMA Shoulder (Scale 1" = 10')



Curb Ramp with Mast Arm, Concrete Sidewalk & HMA Shoulder (Scale 1" = 10')

*GENERAL NOTES:

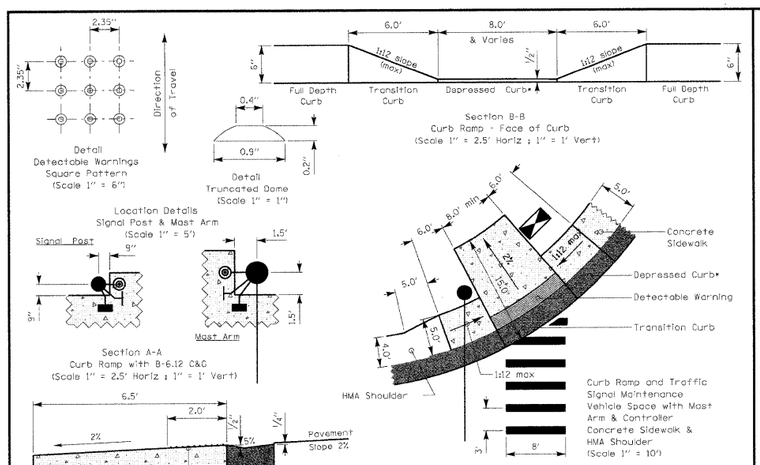
1. The gutter slope for the DEPRESSED CURB adjacent to the curb ramp is a maximum of 5% (standard curb and gutter is 6%). The back of curb rise is 1½" (standard depressed curb is 1½"). See Section A-A (Sheet 2) and IDOT standard 606001 for the different curb dimensions.
2. The Depressed Curb and the Transition Curb will be paid for as COMBINATION CONCRETE CURB AND GUTTER of the type adjacent to the curb ramp.
3. The concrete area consisting of the landing (2% slope) and the side ramps (behind the transition curb) along with the continuation of the 5' concrete between adjacent ramps (if any) will be measured in square feet and paid for as PORTLAND CEMENT CONCRETE SIDEWALK of the thickness specified.
4. The detectable warnings shall be installed inaccordance with Article 424.05 of the IDOT Standard Specifications and the LCDOT specification 424008GD DETECTABLE WARNINGS and shall be measured and paid for per square foot.
5. Since the width of the flag doesn't affect the construction of the ramp, both B-6.12 and B-6.24 Curb & Gutter are portrayed in this standard.

REVISIONS	DATE

LakeCounty Division of Transportation — APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007

CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS (SHEET 1 OF 2)

LC4301

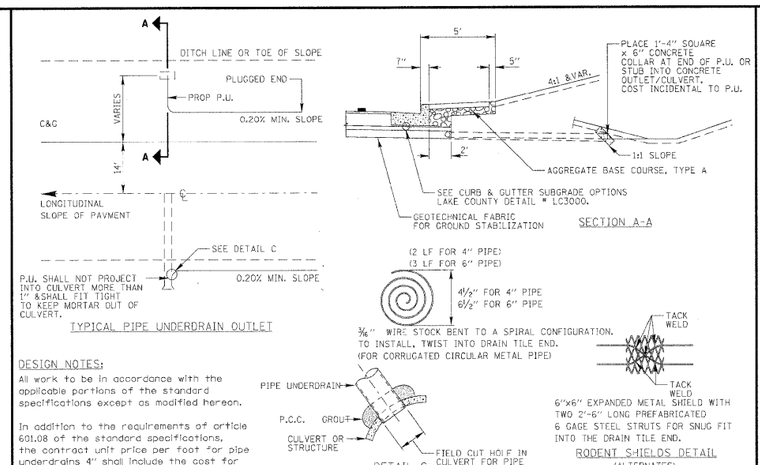


REVISIONS	DATE

LakeCounty Division of Transportation — APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007

CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS (SHEET 2 OF 2)

LC4302



DESIGN NOTES:

All work to be in accordance with the applicable portions of the standard specifications except as modified hereon.

In addition to the requirements of article 601.08 of the standard specifications, the contract unit price per foot for pipe underdrains 4" shall include the cost for furnishing and placing the rodent shield.

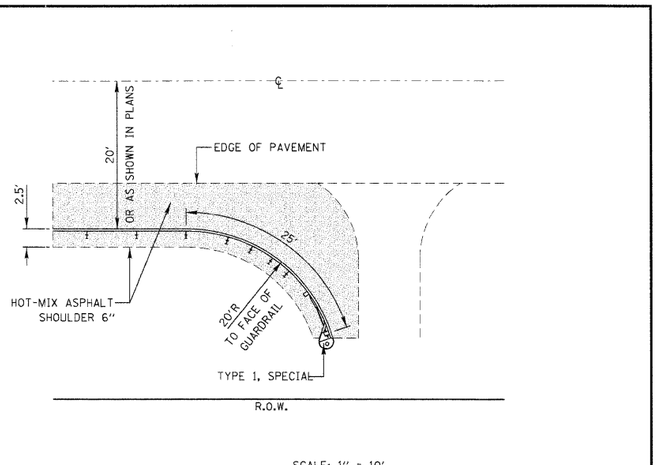
The removable rodent shield shall be furnished and installed in accordance with one of the configurations shown. The shield shall be fabricated from steel wire, or expanded metal, as detailed above and shall be galvanized after fabrication in accordance with AASHTO M-111. Other submitted designs for a removable rodent shield will be allowed with the approval of the engineer.

REVISIONS	DATE

LakeCounty Division of Transportation — APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007

SUB-SURFACE DRAINS

LC4020



SCALE: 1" = 10'

REVISIONS	DATE

LakeCounty Division of Transportation — APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007

TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (RADIAL)

LC4330

FILE NAME = I:\lakeco\08224\l\dgn\sheets\STD_02.dgn

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USER NAME = Steve Prange | PLOT SCALE = 20.0000 ' / IN. | PLOT DATE = 05/29/09

DESIGNED - SJP | DRAWN - SJP | CHECKED - KDN | DATE - 05/29/09

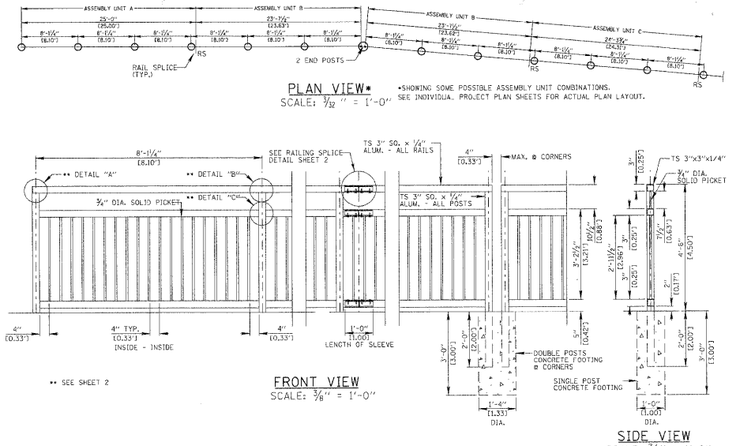
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LakeCounty Division of Transportation

L.C.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 2 OF 5 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	181
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



PLAN VIEW*
SCALE: 3/32" = 1'-0"

*SHOWING SOME POSSTBLE ASSEMBLY UNIT COMBINATIONS. SEE INDIVIDUAL PROJECT PLAN SHEETS FOR ACTUAL PLAN LAYOUT.

FRONT VIEW
SCALE: 3/8" = 1'-0"

SIDE VIEW
SCALE: 3/8" = 1'-0"

DESIGN NOTES:

1.) SINCE THIS FENCE IS A WELDED UNIT, VERTICAL ALIGNMENT MUST BE EITHER LEVEL OR A SINGLE CONSISTENT GRADE THROUHOUT.
2.) DOUBLE POSTS @ CORNERS IS INTENTED TO CHANGE HORIZONTAL ALIGNMENT ONLY. DO NOT USE THESE TO CHANGE VERTICAL ALIGNMENT.

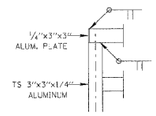
REVISIONS	DATE

LakeCounty Division of Transportation

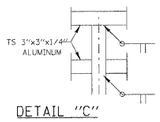
APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

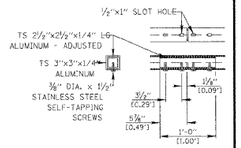
BICYCLE RAILING
(Sheet 1 of 2)

L.C. 63620



DETAIL "A"





RAILING SPLICE DETAIL

DESIGN NOTES:

1. RAILING SHALL BE ACCORDING TO SECTION 509 OF THE IDOT STANDARD SPECIFICATIONS, EXCEPT AS NOTED AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR BICYCLE RAILING.
2. ALL TUBING WILL BE ALUMINUM ALLOY 6063-T52.
3. ALL DIMENSIONS ARE IN FEET AND INCHES EXCEPT AS NOTED.
4. ALL POSTS, RAILING SHALL BE PAINTED IN ACCORDANCE WITH SECTION 506 OF THE IDOT STANDARD SPECIFICATIONS.
5. ALL RAIL WILL BE SANDBLASTED PER SSPC-SP6 FOLLOWED BY SHOP APPLIED PRIMER AND TOP COAT AS FOLLOWS:
   3.00 MILS DFT TNEMEC 66-HI BUILD EPOXOLINE EPOXY INTERMIN COAT. THEN,
   2.00 MILS DFT TNEMEC 73-COLOR ALIPHATIC ACRYLIC POLYURETHANE TOPCOAT - BLACK.
6. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
7. SHOP DRAWINGS BASED ON INDIVIDUAL PROJECT PLAN VIEW LOCATIONS MUST BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.

NO SCALE

REVISIONS	DATE

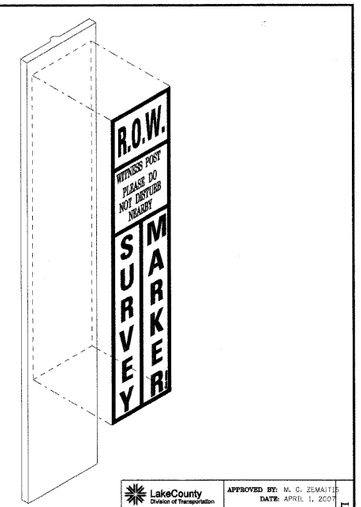
LakeCounty Division of Transportation

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

BICYCLE RAILING
Sheet 2 of 2

L.C. 63630





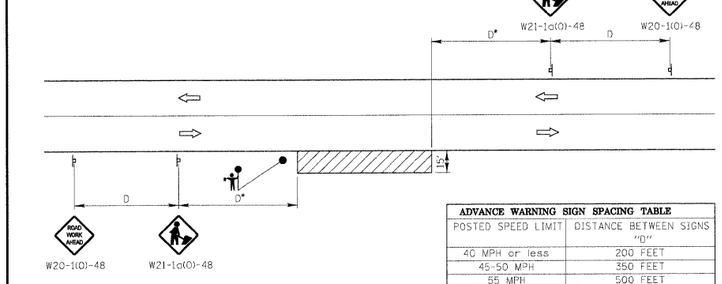
REVISIONS	DATE

LakeCounty Division of Transportation

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

WITNESS POST

L.C. 63660



ADVANCE WARNING SIGN SPACING TABLE	
POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

GENERAL NOTES
This special detail is used at any time, any vehicle, equipment, workers or their activities require a stationary, intermittent or continous moving operation within 15 feet of the traffic lane, where the average speed is 1 mph or less.

• Minimum distance "D" is shown in the Advance Warning Sign Spacing Table. If the work is a moving operation, the maximum distance "D" may be extended to ½ the length required for one normal working day's operation or 4 miles, whichever is less.

ation does not exceed 60 minutes, ay be in accordance with I.D.O.T. 701301.

SYMBOLS

WORK AREA
SIGN ON PORTABLE OR PERMANENT SUPPORT
FLAGGER WITH TRAFFIC CONTROL SIGN WHEN REQUIRED

REVISIONS	DATE

MODIFIED STANDARD 701011-01

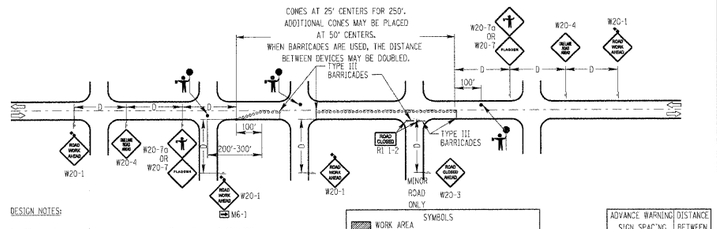
LakeCounty Division of Transportation

APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE AND UTILITY OPERATIONS

TWO LANE, TWO WAY, OFF-ROAD OPERATIONS DAY ONLY OPERATIONS

L.C. 70000



DESIGN NOTES:

1. All warning signs shall have minimum dimensions of 48"x48". The engineer may approve signs measuring 36"x36" when the posted speed limit is 30 mph or less.
2. All signs not on the traveled way shall be post mounted if the closure time exceeds four calendar days. All signs shall be posted with the bottom of the sign not less than 7' above the edge of pavement. "NO PARKING" signs shall be installed throughout the work area at the discretion of the engineer.
3. The flagger shall be in sight of each other or in direct communication at all times. When no work is being performed, the flaggers will not be required. If the flaggers are not present, the flagger sign shall be removed, covered or turned away from traffic.
4. Barricades with Type C steady burning lights shall be used in lieu of cones for night operation. All cones and barricades shall be in accordance with Standard 701901.
5. When necessary, additional flaggers shall be positioned so as to regulate side street traffic.
6. Construction operations shall be confined to one lane, leaving the opposite lane open to traffic.
7. If the work operation is performed between 9:00 am and 3:00 pm and the work does not exceed 15 minutes, the traffic protection shall be as shown for Standard 701301. Signs, when required, shall be at the spacing specified in the Advance Warning Sign Spacing Table.
8. If the work area is in the parking lane and the parking exists during work hours, a "ROAD WORK AHEAD" sign shall be installed in advance of the work area at the spacing specified in the Advance Warning Sign Spacing Table and the area protected with cones or barricades.
9. Type A flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series and the high level warning devices.
10. Longitudinal dimensions may be adjusted to fit field conditions.
11. The location of the construction warning signs shall be determined by the speed limit posted on the road or street on which the construction warning signs are installed.
12. Form BT 725 is required.

SYMBOLS

WORK AREA
CONE OR BARRICADE
SIGN ON PORTABLE OR PERMANENT SUPPORT
ARROW BOARD
TYPE II BARRICADE W/TYPE A FLASHING LIGHT
FLAGGER WITH TRAFFIC CONTROL SIGN

ADVANCE WARNING SIGN SPACING TABLE	DISTANCE BETWEEN SIGNS (D)
POSTED SPEED	
40 MPH OR LESS	200'
45-50 MPH	350'
55 MPH	500'

NOT TO SCALE

MODIFIED STANDARD 701501-03

REVISIONS	DATE
REVISED IDOT REFERENCE	02/05/08

LakeCounty Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

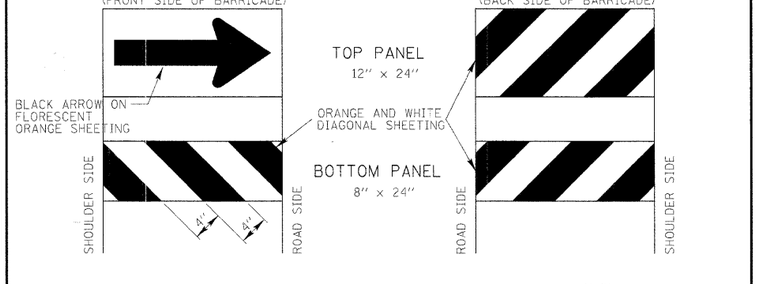
TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE AND UTILITY OPERATIONS

TWO LANE, TWO WAY, UNSIGNALIZED, LANE CLOSURE DAY OR NIGHT OPERATIONS

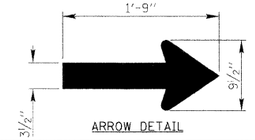
WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH OF THE PAVEMENT DURING SHUTTLING OPERATIONS, OR WHERE CONSTRUCTION REQUIRES LANE CLOSURES

L.C. 70301

DIRECTION INDICATOR BARRICADES



GENERAL NOTES
1) Direction Indicator Barricades shall be constructed from non-metallic Type II barricades meeting the requirements of Article 1106.02 of the Standard Specifications, except where modified by this detail.
2) The Direction Indicator Barricades shall be equipped with Type C steady burning lights if used to channelize traffic during the hours of darkness.
3) The reflective sheeting for the top panel shall be Type AZ fluorescent orange. The diagonal panels shall have orange and white Type A or better reflective sheeting.



ARROW DETAIL

REVISIONS	DATE

LakeCounty Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE

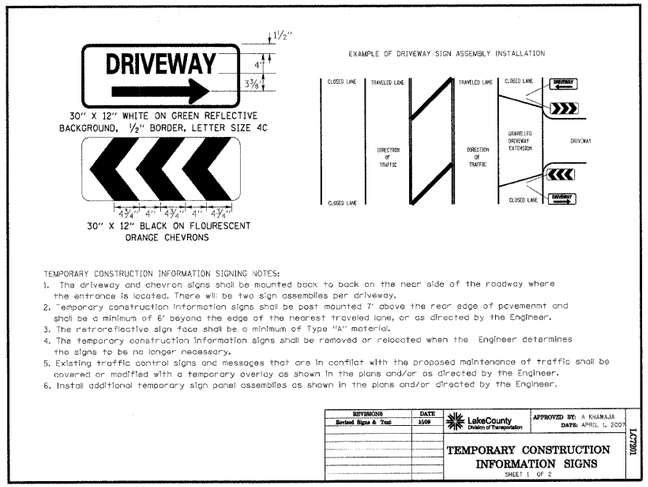
DIRECTION INDICATOR BARRICADES

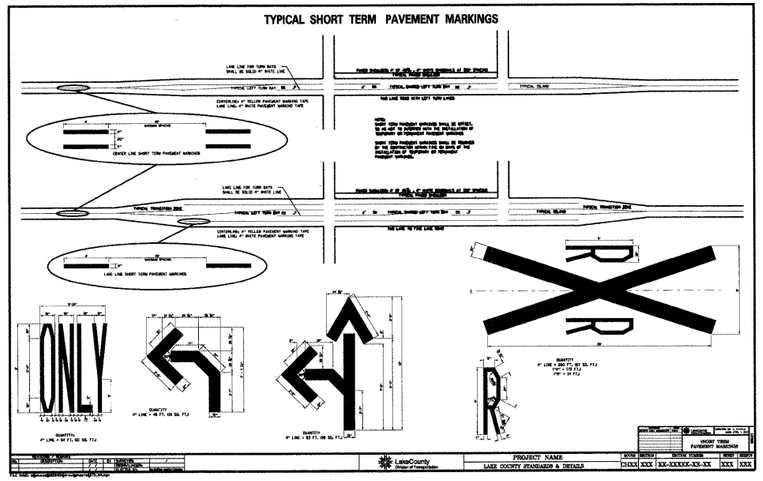
L.C. 70300

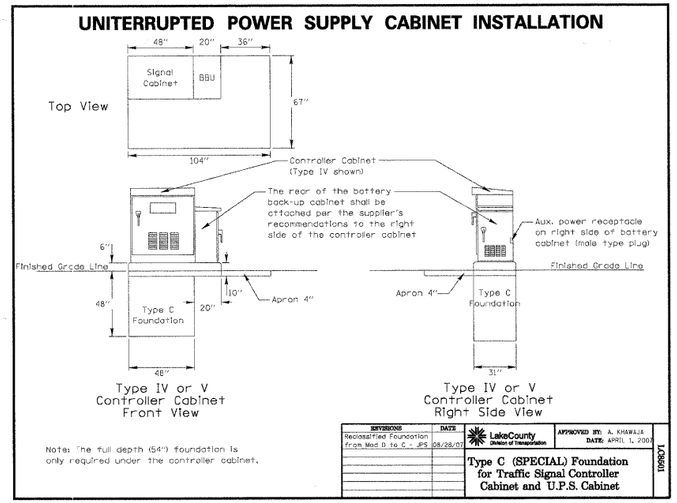
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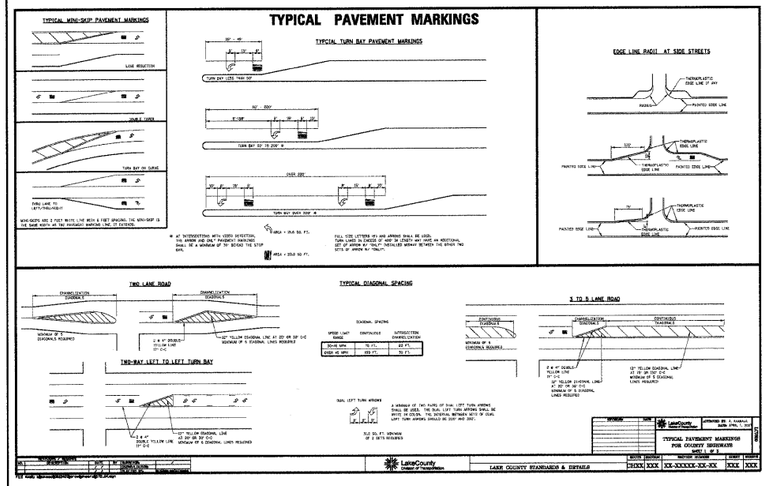
CMT ©Copyright CMT, Inc. CRAWFORD, MURPHY & TILLY, INC. CONSULTING ENGINEERS License No. 184-000613	USER NAME = Steve Prenge	DESIGNED - SJP	REVISED -	LakeCounty Division of Transportation	L.C.D.O.T. STANDARD DRAWINGS
		DRAWN - SJP	REVISED -		
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	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -		

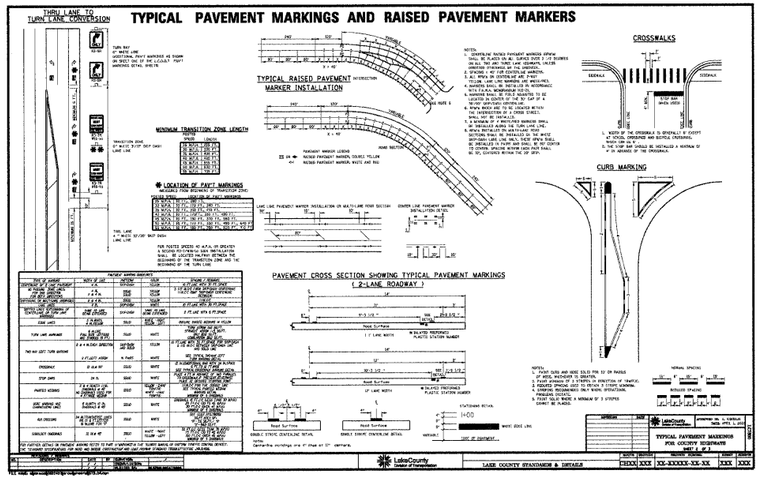
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		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

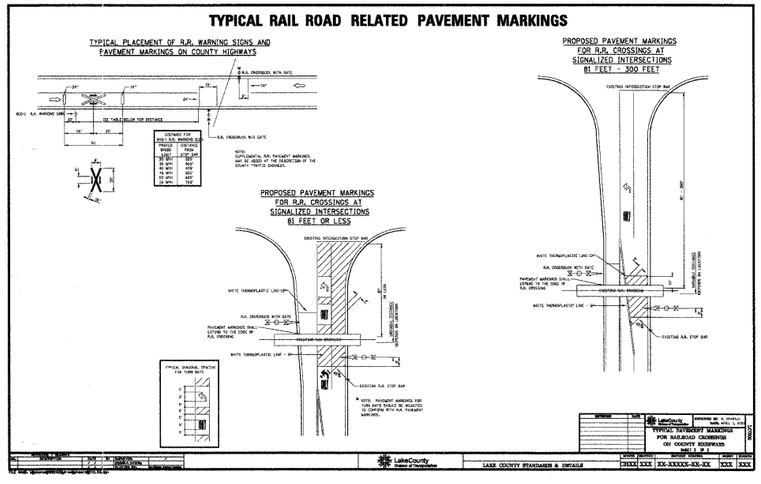












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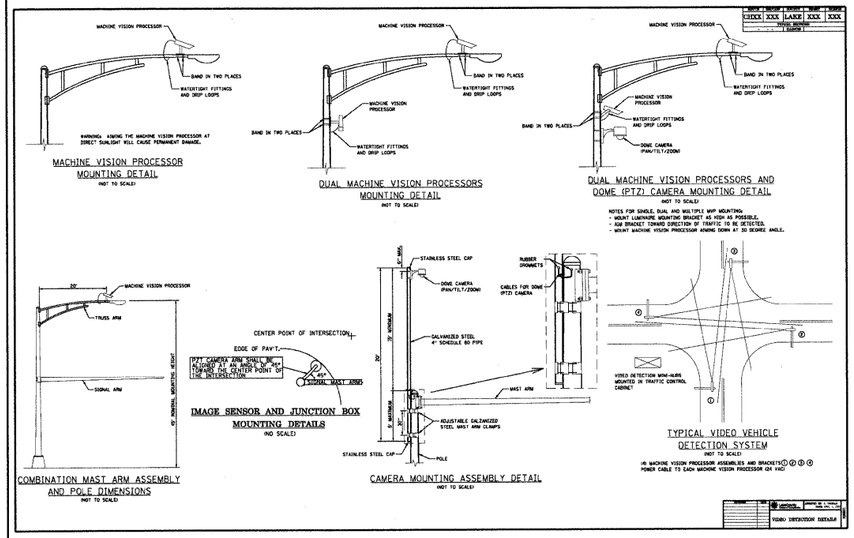
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	DRAWN - SJP	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

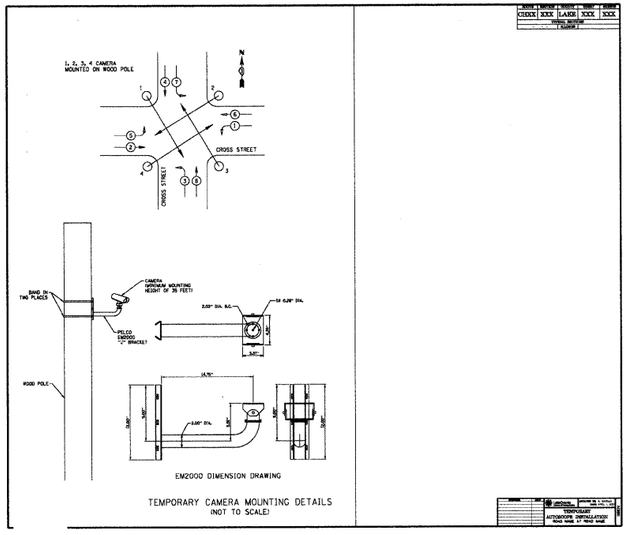
LakeCounty Division of Transportation

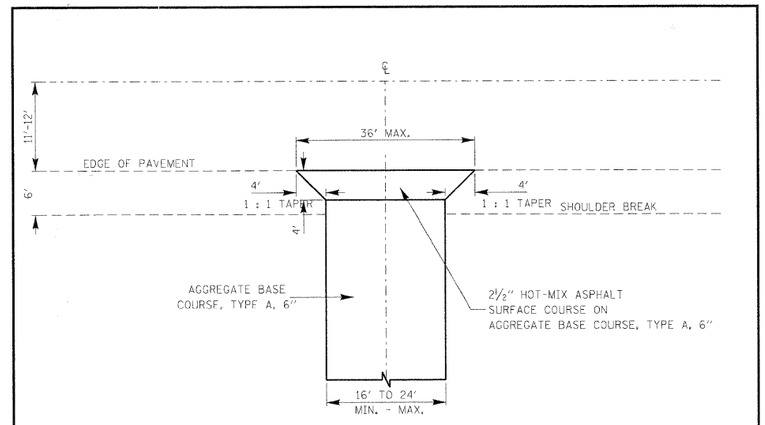
L.C.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 4 OF 5 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	183
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





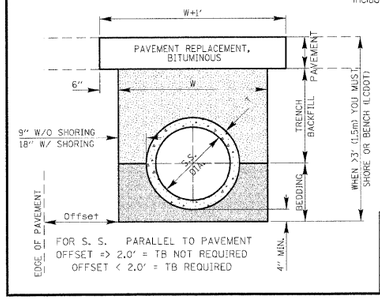


ENGLISH		TRENCH WIDTH (W)		MIN OFFSET FROM E.O.P.* FOR NO TB		½ PIPE AREA (O.D.)
S.S. DIA.	T	WITHOUT SHORING	WITH SHORING	WITHOUT SHORING	WITH SHORING	(SQ FT)
10"	2"	2.67'	4.17'	3.33'	4.08'	0.53
12"	2"	2.83'	4.33'	3.42'	4.17'	0.70
15"	2¼"	3.13'	4.63'	3.56'	4.31'	1.04
18"	2½"	3.42'	4.92'	3.71'	4.46'	1.44
21"	2¾"	3.71'	5.21'	3.85'	4.60'	1.92
24"	3"	4.00'	5.50'	4.00'	4.75'	2.45
27"	3¼"	4.29'	5.79'	4.15'	4.90'	3.06
30"	3½"	4.58'	6.08'	4.29'	5.04'	3.73
36"	4"	5.17'	6.67'	4.58'	5.33'	5.28
42"	4½"	5.75'	7.25'	4.88'	5.63'	7.09
48"	5"	6.33'	7.83'	5.17'	5.92'	9.17

* TO CENTER LINE OF PIPE

DESIGN NOTES:

1. Trench backfill is required if the storm sewer or culvert offset from the edge of the pavement is less than the tabulated values (the inner trench wall is closer than 2' to the edge of pavement).
2. Payment for the trench backfill shall not exceed the quantity computed using the maximum trench width dimensions. If the trench is excavated beyond these limits, the contractor shall furnish and place any additional trench backfill at his/her expence.
3. If the trench width is less than the above maximum values, payment will be based on the actual dimensions of the dug trench.
4. Bedding shall be placed from 4" under the pipe to the spring line of the pipe and is incidental to the corresponding storm sewer or culvert pay item.
5. If any part of the excavation for a drainage structure falls within 2' of the edge of pavement, the space between the side of the excavation and the outer surface of the drainage structure shall be filled with trench backfill. the cost of this item is included in the pay item for the drainage structure.



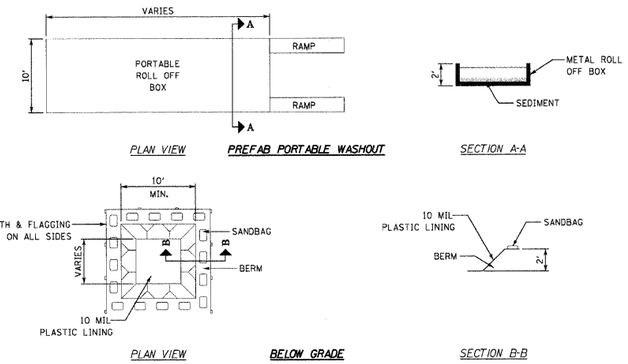
SCALE: 1" = 2'

REVISIONS	DATE
Text Revision	11/06/07

LakeCounty Division of Transportation
APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

TRENCH WIDTHS FOR TRENCH BACKFILL & PAVEMENT REPLACEMENT, BITUMINOUS

LC4020



NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

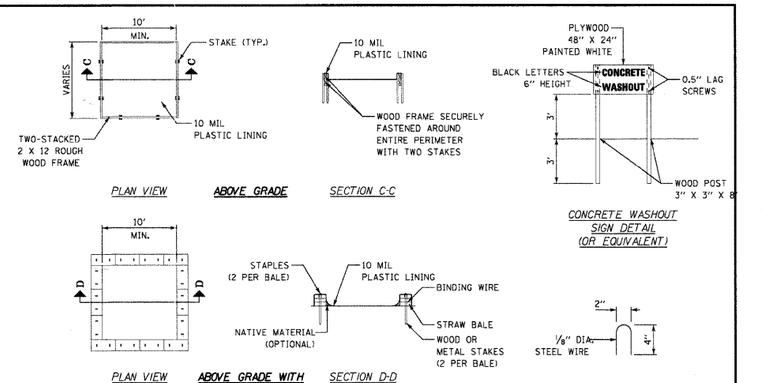
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REVISIONS	DATE

LakeCounty Division of Transportation
APPROVED BY: MGZ
DATE: March 17, 2008

CONCRETE WASHOUT FACILITIES
SHEET 1 OF 2

LC4202



NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

NOT TO SCALE

REVISIONS	DATE

LakeCounty Division of Transportation
APPROVED BY: MGZ
DATE: March 17, 2008

CONCRETE WASHOUT FACILITIES
SHEET 2 OF 2

LC4202

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PLOT DATE = 05/29/09

DESIGNED - SJP
DRAWN - SJP
CHECKED - KDN
DATE - 05/29/09

REVISED -
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REVISED -
REVISED -

LakeCounty Division of Transportation

L.C.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 5 OF 5 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	184
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

ABV	ABOVE	D	DEGREE OF CURVE	INST	INSTALLATION	RR	RAILROAD	T	TANGENT DISTANCE
A/C	ACCESS CONTROL	DC	DEPRESSED CURVE	ISS	INTERSECTION DESIGN STUDY	RRS	RAILROAD SPIKE	T.R.	TANGENT RUNOUT DISTANCE
AC	ACRE	DET	DETECTOR	INV	INVERT	RPS	RAILROAD POINT STAKE	TEL	TELEPHONE
ADT	ADT COUNT	DIA	DIAMETER	IRP	IRON PIPE	REF	REFLECTIVE	TB	TELEPHONE BOX
AE	AERIAL SURVEYS	DIST	DISTRICT	IR	IRON ROD	RCCP	REINFORCED CONCRETE	TP	TELEPHONE POLE
AGG	AGGREGATE	DDW	DOMESTIC	JT	JOINT		PIPE	TEMP	TEMPORARY
AH	AHEAD	SBL	DOUBLE	KG	KILOGRAM	KLINF	REINFORCEMENT	TBM	TEMPORARY BENCH MARK
APT	APARTMENT	DSEL	DOWNSTREAM ELEVATION	km	KILOMETER	REM	REMOVAL	TD	TILE DRAIN
ASPH	ASPHALT	DSFL	DOWNSTREAM FLOWLINE	LS	LANDSCAPING	RC	REMOVE CROWN	TBE	TO BE EXTENDED
AUX	AUXILIARY	DR	DRAINAGE OR DRIVE	LN	LANE	REP	REPLACEMENT	TBR	TO BE REMOVED
AGS	AUXILIARY GAS VALVE	DI	DRAINAGE INLET OR DROP INLET	LT	LEFT	REST	RESTAURANT	TBS	TO BE SAVED
	/ SERVICES	DRV	DRIVEWAY	LP	LIGHT POLE	RESURF	RESURFACING	TWP	TOWNSHIP
AVE	AVENUE	DCT	DUCT	LGT	LIGHTING	RET	RETAINING	TR	TRACTOR ROAD
AX	AXIS OF ROTATION	EA	EACH	LF	LINEAR FEET OR LINEAR FEET		WALL	TS	TRAFFIC SIGNAL
BK	BANK	EB	EASTBOUND		LENGTH OF CURVE LENGTH	ROR	RIGHT-OF-WAY	TSCB	TRAFFIC SIGNAL CONTROL BOX
B-B	BACK TO BACK	EOP	EDGE OF PAVEMENT	LC	LONG CHORD	RD	ROAD	TSC	TRAFFIC SYSTEMS CENTER
BKPL	BACKPLATE	E-CL	EDGE TO CENTERLINE	LNG	LONGITUDINAL	RDWY	ROADWAY	TRVS	TRANSVERSE
B	BARN	E-E	EDGE TO EDGE	L ITEM	LUMP SUM	RTE	ROUTE	TRVL	TRAVEL
BARR	BARRICADE	EL	ELEVATION	MACH	MACHINE	SAN	SANITARY	TRN	TURN
BEG	BEGIN	ENTR	ENTRANCE	MB	MAIL BOX	SANS	SANITARY SEWER	TY	TYPE
BM	BENCHMARK	EXC	EXCAVATION	MH	MANHOLE	SEC	SECTION	T-A	TYPE A
BIND	BINDER	EX	EXISTING	MATL	MATERIAL	SEED	SEEDING	TYPCAL	TYPICAL
BIT	BITUMINOUS	EXPRWAY	EXPRESSWAY	MED	MEDIAN	SHLP	SHAPING	UNDGND	UNDERGROUND
BTM	BOTTOM	E	EXTERNAL DISTANCE OF	MI	MILE	SH	SHEET	USGS	USGS - GEOLOGICAL SURVEY
BLVD	BOULEVARD		HORIZONTAL CURVE	METH	METHOD	SH	SHIELD	USEL	UPSTREAM ELEVATION
BOT	BOTTOM	E	HORIZONTAL DISTANCE TO	MID	MID-ORDINATE	SHLD	SHOULDER	USFL	UPSTREAM FLOWLINE
BRBX	BUFFALO BOX		VERTICAL CURVE	mm	MILLIMETER	SW	SIDEWALK OR SOUTHWEST	UTIL	UTILITY
BLDG	BUILDING	F-F	FACE TO FACE	mm DIA	MILLIMETER DIAMETER	SIG	SIGNAL	VBOX	VALVE BOX
CIP	CAST IRON PIPE	FA	FEDERAL AID	MIN	MINIMUM	SOD	SODDING	VV	VALVE VAULT
CB	CATCH BASIN	FAI	FEDERAL AID INTERSTATE	MBH	MOBILE HOME	SM	SOLID MEDIAN	VL	VAULT
C-C	CENTER TO CENTER	FAP	FEDERAL AID PRIMARY	MOD	MODIFIED	SD	SOUTHBOUND	VEH	VEHICLE
CL	CENTERLINE OR CLEARANCE	FAS	FEDERAL AID SECONDARY	MFT	MOTOR FUEL TAX	SE	SOUTHEAST	VC	VERT. CURVE
CL-E	CENTERLINE TO EDGE	FAUS	FEDERAL AID URBAN SECONDARY	N & BC	NAIL & BATTLE CAP	SW	SOUTHWEST	VERT	VERTICAL
CL-F	CENTERLINE TO FACE		FENCE	N & C	NAIL & CAP	SPL	SPECIAL DITCH	VC	VERTICAL CURVE
CI	CERT.	FE	FIELD ENTRANCE	N & W	NAIL & WASHER	SQ FT	SQUARE FEET	VPC	VERTICAL POINT OF CURVATURE
CERT	CERTIFIED	FH	FIRE HYDRANT	NOAA	NATIONAL OCEANIC ATMOSPHERIC	m²	SQUARE METER	VPI	VERTICAL POINT OF INTERSECTION
CVSLD	CHISELED	FL	FLOW LINE		ADMINISTRATION	mm²	SQUARE MILLIMETER	VPT	VERTICAL POINT OF TANGENCY
CS	CITY STREET	FB	FOOT BRIDGE	NC	NORMAL CROWN	SQ YD	SQUARE YARD	WM	WATER METER
CP	CLAY PIPE	FDN	FOUNDATION	NB	NORTHBOUND	STB	STABILIZED	WV	WATER VALVE
CLSD	CLOSED	FR	FRAME	NE	NORTHEAST	STD	STANDARD	WMAIN	WATER MAIN
CLSD	CLOSED LID	F&G	FRAME & GRATE	NW	NORTHWEST	SBI	STATE BOND ISSUE	WB	WESTBOUND
CT	COAT OR COURT	FRMWY	FREEWAY	OLID	OPEN LID	STA	STATE ROUTE	W/LOPL	WITH CULVERTS
COMB	COMBINATION	GAL	GALLON	OPNG	OPENING		STATION	W	WITH
CS	COMMERCIAL BUILDING	GALV	GALVANIZED	PMD	PAVED	STRUCTBOR	STEEL PLATE BEAM GUARDRAIL	WO	WITHOUT
CE	COMMERCIAL ENTRANCE	GAR	GARAGE	PVMT	PAVEMENT	SS	STORM SEWER		
CONC	CONCRETE	GM	GAS METER	PM	PAVEMENT MARKING	STY	STORY		
CONST	CONSTRUCT	GV	GAS VALVE	PSH	PEDESTRIAL	ST	STREET		
CONTD	CONTINUED	GRAN	GRANULAR	PNT	POINT	STR	STRUCTURE		
CONT	CONTINUOUS	GR	GRATE	PC	POINT OF CURVATURE	e	SUPERELEVATION RATE		
COR	CORNER	GRVL	GRAVEL	PI	POINT OF INTERSECTION OF	S.L. RUN.	SUPERELEVATION RUNOFF		
CORR	CORRUGATED	GND	GROUND		HORIZONTAL CURVE		LENGTH		
CMP	CORRUGATED METAL PIPE	GUT	GUTTER	PRC	POINT OF REVERSE CURVE	SURF	SURFACE		
CNTY	COUNTY	GP	GUY POLE	POB	POINT OF BEGIN	SMK	SURVEY MARKER		
CR	COUNTY HIGHWAY	GW	GUY WIRE	POT	POINT ON TANGENT				
CSC	COURSE	HM	HANDHOLE	POLYETH	POLYETHYLENE				
XSECT	CROSS SECTION	HATCH	HATCHING	PCC	PORTLAND CEMENT CONCRETE				
m³	CUBIC METER	HD	HEAD	PP	POWER POLE OR PRINCIPAL POINT				
mm³	CUBIC MILLIMETER	HDW	HEADWALL	PRIM	PRIME				
CU YD	CUBIC YARD	HDUTY	HEAVY DUTY	PE	PRIVATE ENTRANCE				
CULV	CULVERT	ha	HECTARE	PROF	PROFILE				
C&G	CURB & GUTTER	HWY	HIGHWAY	PGL	PROFILE GRADELINE				
		HORIZ	HORIZONTAL	PROJ	PROJECT				
		HSE	HOUSE	PC	PROPERTY CORNER				
		ILL	ILLINOIS	PL	PROPERTY LINE				
		IMP	IMPROVEMENT	PR	PROPOSED				
		IN DIA	INCH DIAMETER	R	RADIUS				
		INL	INLET						

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
(Sheet 1 of 8)

STANDARD 000001-04

ADJUSTMENT ITEMS

	EX	PR
Structure To Be Adjusted		ADJ
Structure To Be Cleaned		C
Structure To Be Filled		F
Structure To Be Removed		R
Structure To Be Reconstructed		REC
Frame and Grate To Be Adjusted		A
Frame and Lid To Be Adjusted		(A)
Domestic Service Box To Be Adjusted		A
Valve Vault To Be Adjusted		(A)
Special Adjustment		SP
Item To Be Abandoned		AB
Item To Be Moved		M
Item To Be Relocated		REL
Pavement Removal and Replacement		

ALIGNMENT ITEMS

	EX	PR
Baseline		
Centerline		
Centerline Break Circle	○	⊙
Baseline Symbol	℄	℄
Centerline Symbol	℄	℄
Structure To Be Removed	△	△
P.I. Indicator	△	△
Point Indicator	○	○
Horiz Curve Data	CURVE P.I. STA= Δ= R= T= L= E= e= S.R.= S.L. RUN= P.C. STA= P.T. STA=	CURVE P.I. STA= Δ= R= T= L= E= e= S.R.= S.L. RUN= P.C. STA= P.T. STA=

BOUNDARIES ITEMS

	EX	PR
Dashed Property Line		
Solid Property/Lot Line		
Section/Orient Line		
County/Township Line		
State Line		
Iron Pipe Found	●	●
Iron Pipe Set	○	○
Survey Marker		
Property Line Symbol		
Same Ownership Symbol		
Northwest Quarter Corner		
Section Corner		
Southeast Quarter Corner		

CONTOUR ITEMS

	EX	PR
Approx. Index Line		
Approx. Intermediate Line		
Index Contour		
Intermediate Contour		
Slope Limit Line		

DRAINAGE ITEMS

	EX	PR
Culvert Line		
Ditch Profile Line		
Grading & Shaping Ditches		
Drainage Boundary Line		
Paved Ditch		
Aggregate Ditch		
Flowline		
Ditch Check		
Headwall		
Inlet		
Manhole		
Summit		
Roadway Ditch Flow		
Swale		
Catch Basin		
Culvert End Section		
Water Surface Indicator		
Riprap		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
(Sheet 2 of 8)

STANDARD 000001-04

EROSION & SEDIMENT CONTROL ITEMS

	EX	PR
Clearing & Grading Limits		
Dike		
Erosion Control Fence		
Perimeter Erosion Barrier		
Temporary Fence		
Ditch Check Temporary		
Ditch Check Permanent		
Inlet & Pipe Protection		
Sediment Basin		
Erosion Control Blanket		
Fabric Formed Concrete Revetment Mat		
Turf Reinforcement Mat		
Mulch Temporary		
Mulch Method 1		
Mulch Method 2 Stabilized		
Mulch Method 3 Hydraulic		

EXISTING IMPROVEMENT ITEMS

	EX	PR
Noise Attn/Levee		
Fence		
Base of Levee		
Mailbox		
Pay Telephone		
Advertising Sign		

LANDSCAPING ITEMS

	EX	PR
Contour Wounding Line		
Shrubs		
Mowline		
Perennial Plants		
Seeding Class 2		
Seeding Class 2A		
Seeding Class 3		
Seeding Class 4		
Seeding Class 4 & 5 Combined		
Seeding Class 5		
Seeding Class 7		

EXISTING LANDSCAPING ITEMS (cont.)

	EX	PR
Seedings Type 1		
Seedings Type 2		
Sodding		
Moestche w/Sign		
Tree Trunk Protection		
Evergreen Tree		
Shade Tree		

LIGHTING

	EX	PR
Cable In Duct w/o Ground		
Conduit w/Ground		
Electrical Aerial Cable	A	A
Electrical Buried Cable	L	L
Controller		
Underpass Luminaire		
Power Pole		
Pull Point	P	P

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
(Sheet 3 of 8)

STANDARD 000001-04

LIGHTING (cont.)

	EX	PR
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Unit Cont.		
Electrical Ground		
Traffic Flow Arrow		
High Mast Pole		
Light Unit-1		

PAVEMENT (MISC.)

	EX	PR
Keyed Long. Joint		
Keyed Long. Joint w/Tie Bars		
Sawed Long. Joint w/Tie Bars		
Bituminous Shoulder		
Bituminous Taper		
Stabilized Driveway		
Widening		

PAVEMENT MARKINGS

	EX	PR
RR Crossing		
Raised Marker Amber 1 Way		
Raised Marker Amber 2 Way		
Raised Marker Crystal 1 Way		
Two Way Turn Left		
Shoulder (Rep. Pattern		
Skip-Dash White		
Skip-Dash Yellow		
Stop Line		
Solid Line		
Double Centerline		
Dotted Lines		
CL Pvt 2Way 8"@Tp 12.2 m (40') o.c.		
CL Pvt 2Way 8"@Tp 24.4 m (80') o.c.		
CL Multilane Div. 8"@Tp 12.2 m (40') o.c.		
CL Multilane Div. 8"@Tp 24.4 m (80') o.c.		
CL Multilane Div. 06L 8"@Tp 24.4 m (80') o.c.		
CL Multilane Undiv.		
Two Way Turn Left Line		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
(Sheet 4 of 8)

STANDARD 000001-04

PAVEMENT MARKINGS (cont.)

	EX	PR
Urban Combination Left Only		
Urban Combination Right Only		
Urban Left Turn Arrow		
Urban Right Turn Arrow		
Urban Left Turn Only		
Urban Right Turn Only		
Urban Thru Only		
Rural Combination Left Only		
Rural Combination Right Only		
Rural Left Turn Arrow		
Rural Right Turn Arrow		
Rural Left Turn Only		
Rural Right Turn Only		
Rural Thru Only		

RAILROAD ITEMS

	EX	PR
Abandoned Railroad		
Railroad		
Railroad Point	○	
Control Box		
Crossing Gate		
Flashing Signal		
Railroad Cont. Mast Arm		
Crosstruck		

REMOVAL ITEMS

	EX	PR
Removal Tile		
Bituminous Removal		
Hatch Pattern		

RIGHT OF WAY ITEMS

	EX	PR
Future ROW Corner Monument		□
ROW Marker	⊠	■
ROW Line		
Easement		
Temporary Easement		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
(Sheet 5 of 8)

STANDARD 000001-04

ROADWAY PLAN ITEMS

	EX	PR
Edge of Pavement		
Rt Shoulders, Medians and C&G Line		
Aggregate Shoulder		
Sidewalks, Driveways		
Guardrail		
Guardrail Post		
Traffic Sign		
Corrugated Median		

ROADWAY PROFILES

	EX	PR
Profile Line		
P.I. Indicator		
Point Indicator		
Earthworks Balance Point		
Begin Point		
Vert. Curve Data	VPI = ELEV= L = E =	VPI = ELEV= L = E =

SIGNING ITEMS

	EX	PR
Barricade Type 1 or 2		
Barricade Type 3		

SIGNING ITEMS (cont.)

	EX	PR
Barricade Type III		
Barricade With Edge Line		
Flashing Light Sign		
Panels I		
Panels II		
Sign Flag		
Direction of Traffic		
Detour W4-10L-10S		
Detour W4-10R-10S		
One Way Left R6-1L		
One Way Right R6-1R		
One Way Arrow Lrg. W1-6-10S		
Two Way Arrow Large W1-7-10S		
Reverse Left W1-4L		
Reverse Right W1-4R		
Two Way Traffic Sign W6-3		

SIGNING ITEMS (cont.)

	EX	PR
Detour Ahead W20-2		DETOUR AHEAD
Left Lane Closed Ahead		LEFT LANE CLOSED AHEAD
Road Closed Ahead W20-9-10S		ROAD CLOSED AHEAD
Road Closed Ahead W20-3-10S		ROAD CLOSED AHEAD
Road Construction Ahead W20-1-10S		ROAD CONSTRUCTION AHEAD
Singla Lane Ahead		ONE LANE AHEAD
Transition Left W4-2L		
Transition Right W4-2R		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
(Sheet 6 of 8)

STANDARD 000001-04

FILE NAME = i:\lakeco\08224001\dgn\sheets\STD_06.dgn

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		DRAWN - SJP	REVISED -	
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 1 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	185
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SIGNING ITEMS (cont.)

	EX	PR
Left Turn Lane R3-11(50)L		LEFT TURN LANE
Keep Left R4-1AL		KEEP LEFT
Keep Left R4-1BL		KEEP LEFT
Keep Right R4-1AR		KEEP RIGHT
Keep Right R4-1BR		KEEP RIGHT
Stop Here On Red R10-6-ML		STOP HERE ON RED
Stop Here On Red R10-6-MR		STOP HERE ON RED
No Left Turn R3-2		
No Right Turn R3-1		
Road Closed R11-2		ROAD CLOSED
Road Closed Thru Traffic R11-2		ROAD CLOSED THRU TRAFFIC

TRAFFIC SHEET ITEMS

	EX	PR
Cable Number		
Left Turn Green		
Left Turn Yellow		
Signal Backplate		
Signal Section 200 mm (8")		
Signal Section 300 mm (12")		
Walk/Don't Walk Letters		
Walk/Don't Walk Symbols		

TRAFFIC SIGNAL ITEMS

	EX	PR
Galv. Steel Conduit		
Underground Cable		
Detector Loop Line		
Detector Loop Large		
Detector Loop Small		
Detector Loop Quadrapole		
Detector Roadway		
Aluminum Mast Arm		
Steel Mast Arm		
Veh. Detector Magnetic		

TRAFFIC SIGNAL ITEMS (cont.)

	EX	PR
Conduit Splice		
Controller		
Gulfbox Junction		
Wood Pole		
Temp. Signal Head		
Handhole		
Heavy Duty Handhole		
Junction Box		
Ped. Pushbutton Detector		
Ped. Signal Head		
Power Pole Service		
Priority Veh. Detector		
Signal Head		
Signal Head w/Backplate		
Signal Post		

UNDERGROUND UTILITY ITEMS

	EX	PR
Cable TV		
Electric Cable		
Fiber Optic		
Gas Pipe		
Oil Pipe		
Pipe Underdrain		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS (Sheet 7 of 8)

STANDARD 000001-04

UNDERGROUND UTILITY ITEMS (cont.)

	EX	PR
Sanitary Sewer		
Storm Sewer		
Telephone Cable		
Water Pipe		

UTILITIES ITEMS

	EX	PR
Controller		
Double Handhole		
Fire Hydrant		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Pole		
Manhole		
Power Pole		
Spare Box Above Ground		
Telephone Spare Box Above Ground		
Telephone Pole		
Traffic Signal		
Water Meter Valve Box		

VEGETATION ITEMS

	EX	PR
Deciduous Tree		
Bush		
Evergreen Tree		
Stump		
Vegetation Line		
Woods & Bush Line		

WATER FEATURE ITEMS

	EX	PR
Stream or Drainage Ditch		
Waters Edge		
Water Surface Indicator		
Water Point		
Disappearing Ditch		
Marsh		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS (Sheet 8 of 8)

STANDARD 000001-04

REINFORCEMENT BARS - METRIC ENGLISH

Bar Size metric (inch)	Dia. mm (in.)	Cross-Sectional Area sq. mm (sq. in.)	Weight kg/m (lb./ft.)	SPACING, mm (in.) 100 (4)	125 (5)	140 (5½)	150 (6)	165 (6½)	175 (7)	190 (7½)	200 (8)	215 (8½)	225 (9)	250 (10)	275 (11)	300 (12)
				AREA OF STEEL PER METER (FOOT), sq. mm (sq. in.)												
10 (3)	9.5 (0.375)	71 (0.110)	0.560 (0.376)	710 (1.33)	617 (0.953)	568 (0.264)	507 (0.220)	473 (0.209)	430 (0.203)	406 (0.188)	374 (0.176)	356 (0.165)	330 (0.151)	316 (0.141)	284 (0.132)	258 (0.120)	237 (0.110)
13 (4)	12.7 (0.500)	129 (0.196)	0.944 (0.668)	1290 (0.589)	1122 (0.523)	1032 (0.470)	921 (0.429)	860 (0.352)	782 (0.363)	737 (0.336)	679 (0.314)	645 (0.294)	600 (0.277)	573 (0.261)	516 (0.235)	469 (0.214)	430 (0.196)
16 (5)	15.9 (0.625)	199 (0.307)	1.552 (1.043)	1990 (0.923)	1730 (0.819)	1590 (0.737)	1421 (0.659)	1327 (0.616)	1206 (0.567)	1137 (0.526)	1047 (0.491)	996 (0.453)	926 (0.433)	884 (0.409)	796 (0.368)	724 (0.336)	663 (0.307)
19 (6)	19.1 (0.750)	284 (0.442)	2.235 (1.502)	2840 (1.326)	2470 (1.178)	2272 (1.061)	2025 (0.964)	1893 (0.869)	1721 (0.815)	1623 (0.758)	1498 (0.707)	1420 (0.663)	1321 (0.626)	1262 (0.588)	1136 (0.530)	1032 (0.487)	947 (0.443)
22 (7)	22.2 (0.875)	387 (0.601)	3.042 (2.044)	3870 (1.803)	3366 (1.602)	3096 (1.442)	2784 (1.311)	2580 (1.202)	2345 (1.110)	2211 (1.030)	2037 (0.962)	1936 (0.900)	1800 (0.848)	1720 (0.801)	1548 (0.723)	1407 (0.664)	1290 (0.602)
25 (8)	25.4 (1.000)	510 (0.785)	3.973 (2.670)	5100 (2.355)	4435 (2.053)	4080 (1.884)	3643 (1.713)	3400 (1.570)	3051 (1.445)	2914 (1.360)	2684 (1.256)	2550 (1.178)	2372 (1.128)	2267 (1.057)	2040 (0.942)	1855 (0.856)	1700 (0.785)
29 (9)	28.7 (1.128)	645 (1.000)	5.060 (3.400)	6450 (3.000)	5609 (2.667)	5160 (2.400)	4607 (2.182)	4300 (2.000)	3909 (1.846)	3686 (1.714)	3395 (1.600)	3225 (1.512)	3000 (1.412)	2867 (1.333)	2580 (1.200)	2345 (1.091)	2150 (1.000)
32 (10)	32.3 (1.270)	815 (1.267)	6.404 (4.303)	8150 (3.803)	7120 (3.378)	6552 (3.041)	5850 (2.764)	5450 (2.534)	4964 (2.333)	4680 (2.172)	4311 (2.027)	4095 (1.901)	3809 (1.789)	3640 (1.689)	3276 (1.520)	2978 (1.382)	2730 (1.267)
36 (11)	35.8 (1.410)	1006 (1.561)	7.907 (5.313)	10060 (4.683)	8748 (4.063)	8049 (3.748)	7186 (3.406)	6707 (3.129)	6097 (2.887)	5749 (2.676)	5295 (2.498)	5030 (2.349)	4679 (2.204)	4471 (2.081)	4024 (1.873)	3658 (1.703)	3353 (1.561)

AREAS OF REINFORCEMENT BARS

STANDARD 001001-01

DECIMAL OF AN INCH AND OF A FOOT

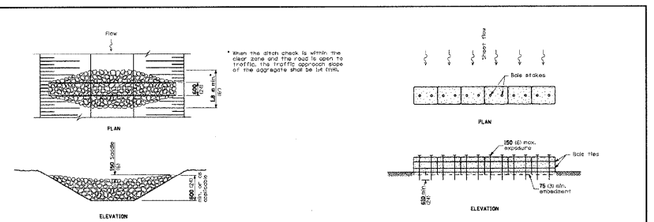
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0.0104	1/8	0.1771	2 1/8	0.34375	4 1/8	0.5104	6 1/8	0.6771	8 1/8	0.84375	10 1/8
0.015625	3/16	0.1823	2 3/16	0.3490	4 3/16	0.515625	6 3/16	0.6823	8 3/16	0.8490	10 3/16
0.0208	1/4	0.1875	2 1/4	0.3542	4 1/4	0.5208	6 1/4	0.6875	8 1/4	0.8542	10 1/4
0.0260	5/16	0.1927	2 5/16	0.359375	4 5/16	0.5260	6 5/16	0.6927	8 5/16	0.859375	10 5/16
0.03125	3/8	0.1979	2 3/8	0.3646	4 3/8	0.53125	6 3/8	0.6979	8 3/8	0.8646	10 3/8
0.0365	7/16	0.203125	2 7/16	0.3698	4 7/16	0.5365	6 7/16	0.703125	8 7/16	0.8698	10 7/16
0.0417	1/2	0.2083	2 1/2	0.3750	4 1/2	0.5417	6 1/2	0.7083	8 1/2	0.8750	10 1/2
0.046875	9/16	0.2135	2 9/16	0.3802	4 9/16	0.546875	6 9/16	0.7135	8 9/16	0.8802	10 9/16
0.0521	5/8	0.21875	2 5/8	0.3854	4 5/8	0.5521	6 5/8	0.71875	8 5/8	0.8854	10 5/8
0.0573	11/16	0.2240	2 11/16	0.390625	4 11/16	0.5573	6 11/16	0.7240	8 11/16	0.890625	10 11/16
0.0625	3/4	0.2292	2 3/4	0.3958	4 3/4	0.5625	6 3/4	0.7292	8 3/4	0.8958	10 3/4
0.0677	13/16	0.234375	2 13/16	0.4010	4 13/16	0.5677	6 13/16	0.734375	8 13/16	0.9010	10 13/16
0.0729	7/8	0.2396	2 7/8	0.40625	4 7/8	0.5729	6 7/8	0.7396	8 7/8	0.90625	10 7/8
0.078125	15/16	0.2448	2 15/16	0.4115	4 15/16	0.578125	6 15/16	0.7448	8 15/16	0.9115	10 15/16
0.0833	1	0.2500	3	0.4167	5	0.5833	7	0.7500	9	0.9167	11
0.0885	1 1/16	0.2552	3 1/16	0.421875	5 1/16	0.5885	7 1/16	0.7552	9 1/16	0.921875	11 1/16
0.09375	1 1/8	0.2604	3 1/8	0.4271	5 1/16	0.59375	7 1/8	0.7604	9 1/8	0.9271	11 1/8
0.0990	1 3/16	0.265625	3 3/16	0.4323	5 3/16	0.5990	7 3/16	0.765625	9 3/16	0.9323	11 3/16
0.1042	1 1/4	0.2708	3 1/4	0.4375	5 1/4	0.6042	7 1/4	0.7708	9 1/4	0.9375	11 1/4
0.109375	1 5/16	0.2760	3 5/16	0.4427	5 5/16	0.609375	7 5/16	0.7760	9 5/16	0.9427	11 5/16
0.1146	1 3/8	0.28125	3 3/8	0.4479	5 3/8	0.6146	7 3/8	0.78125	9 3/8	0.9479	11 3/8
0.1198	1 7/16	0.2865	3 7/16	0.453125	5 7/16	0.6198	7 7/16	0.7865	9 7/16	0.953125	11 7/16
0.1250	1 1/2	0.2917	3 1/2	0.4583	5 1/2	0.6250	7 1/2	0.7917	9 1/2	0.9583	11 1/2
0.1302	1 9/16	0.296875	3 9/16	0.4635	5 9/16	0.6302	7 9/16	0.796875	9 9/16	0.9635	11 9/16
0.1354	1 5/8	0.3021	3 5/8	0.46875	5 5/8	0.6354	7 5/8	0.8021	9 5/8	0.96875	11 5/8
0.140625	1 11/16	0.3073	3 11/16	0.4740	5 11/16	0.640625	7 11/16	0.8073	9 11/16	0.9740	11 11/16
0.1458	1 3/4	0.3125	3 3/4	0.4792	5 3/4	0.6458	7 3/4	0.8125	9 3/4	0.9792	11 3/4
0.1510	1 13/16	0.3177	3 13/16	0.484375	5 13/16	0.6510	7 13/16	0.8177	9 13/16	0.984375	11 13/16
0.15625	1 7/8	0.3229	3 7/8	0.4896	5 7/8	0.65625	7 7/8	0.8229	9 7/8	0.9896	11 7/8
0.1615	1 15/16	0.328125	3 15/16	0.4948	5 15/16	0.6615	7 15/16	0.828125	9 15/16	0.9948	11 15/16
0.1667	2	0.3333	4	0.5000	6	0.6667	8	0.8333	10	1.0000	12

A = Fractions of Inch or Foot

B = Inch Equivalents to Foot Fractions

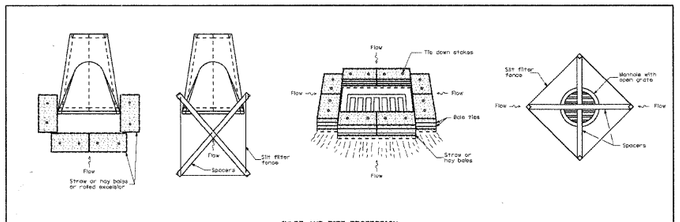
DECIMAL OF AN INCH AND OF A FOOT

STANDARD 001006



TEMPORARY EROSION CONTROL SYSTEMS (Sheet 1 of 2)

STANDARD 280001-03



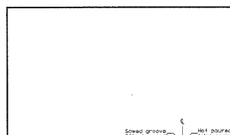
TEMPORARY EROSION CONTROL SYSTEMS (Sheet 2 of 2)

STANDARD 280001-03

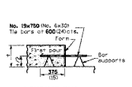
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CMT ©Copyright CMT, Inc. CRAWFORD, MURPHY & TILLY, INC. CONSULTING ENGINEERS License No. 184-000613	USER NAME = Steve Prange	DESIGNED - SJP	REVISED -	LakeCounty Division of Transportation	I.D.O.T. STANDARD DRAWINGS
		DRAWN - SJP	REVISED -		
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -		SCALE: N.T.S. | SHEET NO. 2 OF 14 SHEETS | STA. N/A | TO STA. N/A
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -		

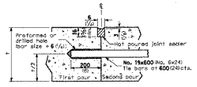
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	186
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



LONGITUDINAL SAWED JOINT

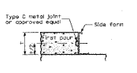


LONGITUDINAL CONSTRUCTION JOINT
(TIE BAR FORMED IN PLACE)

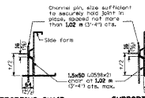


LONGITUDINAL CONSTRUCTION JOINT
(TIE BAR DRILLED IN PLACE)

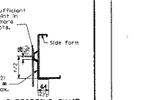
TYPE C METAL JOINT



LONGITUDINAL KEYED JOINT



SUPPORTING CHAIR ALTERNATE



SUPPORTING CHAIR ALTERNATE

SECTION A-A

GENERAL NOTES

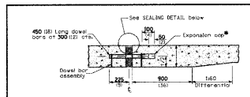
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (rise).

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

PAVEMENT JOINTS

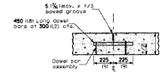
(Sheet 1 of 2)

STANDARD 420001-06

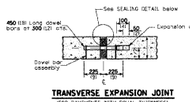


TRANSVERSE EXPANSION JOINT
FOR PAVEMENTS WITH UNIFORM THICKNESS

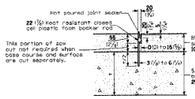
* Expansion caps shall be installed on the supported end of each dowel bar once the header has been removed and the joint filler material has been installed.



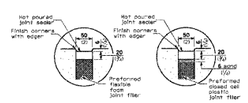
TRANSVERSE CONTRACTION JOINT



TRANSVERSE EXPANSION JOINT
FOR PAVEMENTS WITH EQUAL THICKNESS



TRANSVERSE CONTRACTION JOINT
FOR CAM, CTA AND LTA BASE COURSE MIXTURES



SEALING DETAIL

DOWEL BAR TABLE	
PAVEMENT THICKNESS	DOWEL BAR DIAMETER
200 (8) or greater	38 (1½)
175 (7) thru 199 (7.99)	32 (1¼)
Less than 175 (7)	25 (1)

GENERAL NOTES

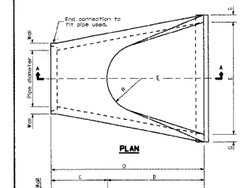
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (rise).

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

PAVEMENT JOINTS

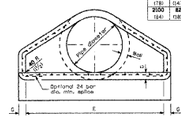
(Sheet 2 of 2)

STANDARD 420001-06



PLAN

SECTION A-A



END VIEW

TYPE STA.	APPROX. QTY. PER LINEAR METER	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
300	240	51	102	630	1.241 m	1.851 m	630	51	229	5:2:1
(12)	(730)	(2)	(4)	(24)	(4'-1")	(6'-1")	(24)	(2)	(9)	
375	335	57	152	646	1.258 m	1.854 m	762	57	280	5:2:1
(15)	(1140)	(2¼)	(6)	(27)	(4'-1")	(6'-1")	(30)	(2¼)	(11)	
450	460	64	229	686	1.268 m	1.854 m	914	64	305	5:2:1
(18)	(1580)	(2½)	(9)	(27)	(4'-2")	(6'-1")	(36)	(2½)	(12)	
525	580	70	229	889	996	1.854 m	1.067 m	70	330	5:2:1
(21)	(1980)	(2¾)	(9)	(35)	(39)	(6'-1")	(42)	(2¾)	(13)	
600	690	76	241	1.105 m	762	1.867 m	1.219 m	76	356	5:2:1
(24)	(2320)	(3)	(9½)	(3'-7½")	(30)	(6'-1½")	(48)	(3)	(14)	
675	815	83	267	1.219 m	648	1.867 m	1.372 m	83	368	5:2:1
(27)	(2820)	(3¼)	(10½)	(4'-0")	(25½)	(6'-1½")	(54)	(3¼)	(14½)	
750	995	89	305	1.375 m	502	1.874 m	1.524 m	89	381	5:2:1
(30)	(3260)	(3½)	(12)	(4'-6")	(19¾)	(6'-1½")	(60)	(3½)	(15)	
825	1450	95	343	1.486 m	997	2.487 m	1.676 m	95	445	5:2:1
(33)	(4300)	(3¾)	(13½)	(4'-10½")	(39¼)	(8'-1½")	(66)	(3¾)	(17½)	
900	1860	102	381	La =	883	2.487 m	1.829 m	102	508	5:2:1
(36)	(5520)	(4)	(15)	(5'-3")	(34¾)	(8'-1½")	(72)	(4)	(20)	
1050	2440	114	533	La =	889	2.499 m	1.981 m	114	559	5:2:1
(42)	(7280)	(4½)	(21)	(5'-3½")	(35)	(8'-2")	(78)	(4½)	(22)	
1200	3170	127	610	1.879 m	660	2.499 m	2.134 m	127	559	5:2:1
(48)	(9450)	(5)	(24)	(6'-2")	(26)	(8'-2")	(84)	(5)	(22)	
1350	3940	140	686	1.881 m	889	3.34 m	2.286 m	140	610	5:2:0
(54)	(11740)	(5½)	(27)	(6'-2")	(35)	(10'-11")	(90)	(5½)	(24)	
1500	3960	152	889	1.524 m	991	2.515 m	2.438 m	127	*	10:3
(60)	(11780)	(6)	(35)	(5'-0")	(39)	(8'-3")	(96)	(5)		
1650	4860	165	762	1.829 m	686	2.515 m	2.591 m	140	*	10:3
(66)	(14210)	(6½)	(30)	(6'-0")	(27)	(8'-3")	(102)	(5½)		
1800	5680	178	914	1.981 m	635	2.514 m	2.743 m	152	*	10:3
(72)	(16920)	(7)	(36)	(6'-6")	(25)	(8'-3")	(108)	(6)		
1950	6710	191	1.067 m	2.286 m	660	2.515 m	2.896 m	165	*	10:3
(78)	(19970)	(7½)	(42)	(7'-6")	(26)	(8'-3")	(114)	(6½)		
2100	8240	203	1.219 m	2.591 m	533	2.832 m	3.048 m	165	*	10:3
(84)	(24530)	(8)	(48)	(8'-6")	(21)	(9'-3")	(120)	(6½)		

* Radius as furnished by manufacturer

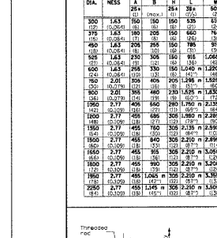
GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (rise).

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

PRECAST REINFORCED CONCRETE FLARED END SECTION

STANDARD 542301-01



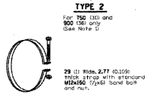
LONGITUDINAL SAWED JOINT

TYPE 1
For 300 (12) thru 600 (24) only (See Note 3)

TYPE 2
For 750 (30) and 900 (36) only (See Note 3)

TYPE 3
(See Note 3)

TYPE 4
(See Note 3)



ALTERNATE STRAP CONNECTOR
(For Type 1 only)

CONNECTIONS OF END SECTIONS

PIPE DIA.	THICK-NESS	DIMENSIONS A 254 (10) min.	B	H 254 (10) min.	L 254 (10) min.	W 50+ (2+)	SLOPE (Approx.) (rise)	BOOT
300 (12)	1.63 (0.064)	150 (6)	150 (6)	150 (6)	535 (21)	610 (24)	1:0.5	1 Pc.
375 (15)	1.63 (0.064)	180 (7)	209 (8¼)	150 (6)	660 (26)	760 (30)	1:0.5	1 Pc.
450 (18)	1.63 (0.064)	206 (8)	259 (10)	150 (6)	785 (31)	915 (36)	1:0.5	1 Pc.
525 (21)	1.63 (0.064)	232 (9)	305 (12)	150 (6)	915 (36)	1.066 m (42")	1:0.5	1 Pc.
600 (24)	1.63 (0.064)	258 (10)	330 (13)	150 (6)	1.040 m (41")	1.220 m (48")	1:0.5	1 Pc.
750 (30)	2.01 (0.079)	306 (12)	406 (16)	205 (8)	1.298 m (51")	1.524 m (60")	1:0.5	2 Pc.
900 (36)	2.01 (0.079)	358 (14)	480 (19)	235 (9¼)	1.535 m (60½")	1.830 m (72")	1:0.5	2 Pc.
1050 (42)	2.77 (0.109)	406 (16)	556 (22)	260 (10¼)	1.750 m (69")	2.135 m (84")	1:0.5	2 Pc.
1200 (48)	2.77 (0.109)	455 (18)	686 (27)	305 (12)	1.980 m (78")	2.285 m (90")	1:0.5	2 Pc.
1350 (54)	2.77 (0.109)	455 (18)	762 (30)	305 (12)	2.207 m (87")	2.590 m (102")	1:0	2 Pc.
1500 (60)	2.77 (0.109)	455 (18)	840 (33)	305 (12)	2.210 m (87")	2.895 m (114")	1:0.75	3 Pc.
1650 (66)	2.77 (0.109)	455 (18)	915 (36)	305 (12)	2.210 m (87")	3.050 m (120")	1:0.5	3 Pc.
1800 (72)	2.77 (0.109)	455 (18)	990 (39)	305 (12)	2.210 m (87")	3.200 m (126")	1:0.5	3 Pc.
1950 (78)	2.77 (0.109)	455 (18)	1.065 m (42")	305 (12)	2.210 m (87")	3.355 m (132")	1:0.5	3 Pc.
2100 (84)	2.77 (0.109)	455 (18)	1.145 m (45")	305 (12)	2.210 m (87")	3.509 m (138")	1:0.5	3 Pc.

NOTES

For 1500 mm (60") thru 2250 mm (84") sizes, reinforced edges shall be supplemented with stiffener angles. The angles shall be 51x51x4.8 mm (2"x2"x3/16") 1500 mm (60") thru 1800 mm (72") and 64x64x4.8 mm (2½"x2½"x3/16") for 1950 mm (78") thru 2250 mm (84") diameter. The angles shall be attached by M22 (7/8") rivets or bolts.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (rise).

NOTES

1. Types 1 and 2 for pipes with annular end corr.

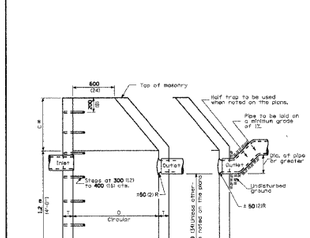
2. Type 3 connection can be used for all pipe sizes and includes 300 mm (12") of connector section. The connector section shall be crimped to fit and section by rivets or bolts and shall be the same metal thickness as the end section. Stub shall be either 68 mm (2 7/8") pitch x 13 mm (1/2") deep annular or 152 mm (6") pitch x 25 mm (1") depth annular corrugated pipe.

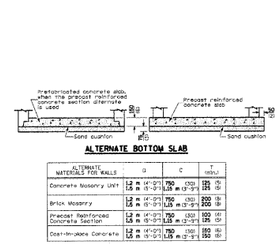
3. Type 4 connection can be used for all pipe sizes. Coupler shall be 68 mm x 13 mm (2 7/8" x 1/2") annular corrugated band with lugs for 13 mm x 25 mm (1/2" x 1") bar. Annular, mugger, or annular band may be used with corrugated metal pipes having helical ends, only the annular band will be allowed.

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

METAL END SECTION FOR PIPE CULVERTS

STANDARD 542401





ALTERNATE BOTTOM SLAB

ALTERNATE MATERIALS FOR WALLS	D	C	T (min.)
Concrete Masonry Unit	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	125 (5)
	1.8 m (6'-0") to 2.25 m (7'-6")	1.125 (45)	175 (7)
Brick Masonry	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	200 (8)
	1.8 m (6'-0") to 2.25 m (7'-6")	1.125 (45)	200 (8)
Precast Reinforced Concrete Section	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	100 (4)
	1.8 m (6'-0") to 2.25 m (7'-6")	1.125 (45)	125 (5)
Cast-in-place Concrete	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	150 (6)
	1.8 m (6'-0") to 2.25 m (7'-6")	1.125 (45)	150 (6)

GENERAL NOTES

All catch basins shall be 1.2 m (4'-0") in diameter unless otherwise noted on the plans.

* Dimension C for precast reinforced concrete base may be adjusted to the dimension given in Figure 1 of AASHTO M199.

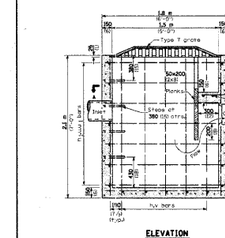
See Standard 602501 for optional precast reinforced concrete flat slab top.

See Standard 602701 for details of steps.

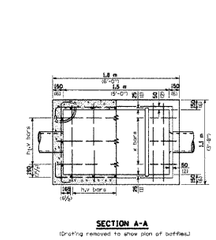
All dimensions are in millimeters (inches) unless otherwise shown.

CATCH BASIN TYPE A

STANDARD 602001



ELEVATION



SECTION A-A
(Grating removed to show plan of bottom)

MATERIALS REQUIRED FOR ONE (1) TYPE B CATCH BASIN

Bar	Qty.	Size	Shape	Length
h	3	No. 13 (No. 4)		1.02 m (3'-4")
h1	3	No. 13 (No. 4)		1.72 m (5'-8")
w	14	No. 13 (No. 4)		2.10 m (7'-0")
w1	14	No. 13 (No. 4)		1.35 m (4'-6")
v	15	No. 13 (No. 4)		2.02 m (6'-9")
x	3	No. 13 (No. 4)		0.58 m (1'-11")
Concrete			m^3 (cu. yds.)	1.80 (2.3)
Reinforcement bars			kg (lbs.)	95 (210)

All bars shall be at 300 (12) centers unless otherwise shown. Reinforcement bar clearance shall be 40 (1½).

GENERAL NOTES

See Standard 602701 for details of steps.

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

CATCH BASIN TYPE B

STANDARD 602006-01

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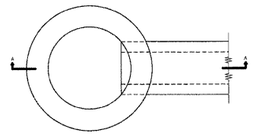
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LakeCounty Division of Transportation

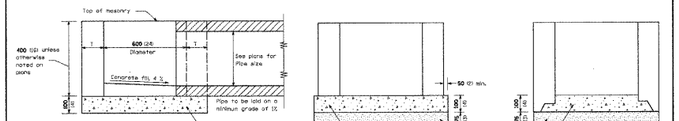
I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 3 OF 14 SHEETS | STA. N/A | TO STA. N/A

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		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



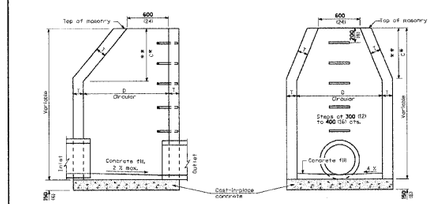
ALTERNATE MATERIALS FOR WALLS	T
BRICK MASONRY	200 (8)
CAST-IN-PLACE CONCRETE	150 (6)
CONCRETE MASONRY UNIT	125 (5)
PRECAST REINFORCED CONCRETE SECTION	75 (3)



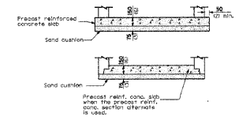
All dimensions are in millimeters (inches) unless otherwise shown.

INLET - TYPE A

STANDARD 602301-01



ALTERNATE MATERIALS FOR WALLS	D	C	T (mm)
Concrete Masonry Units	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	125 (5)
	1.8 m (6'-0")	1.05 m (3'-6")	125 (5)
Brick Masonry	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	200 (8)
	1.8 m (6'-0")	1.05 m (3'-6")	200 (8)
Precast Reinforced Concrete Section	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	100 (4)
	1.8 m (6'-0")	1.05 m (3'-6")	125 (5)
Cast-in-place Concrete	1.2 m (4'-0") to 1.5 m (5'-0")	750 (30)	150 (6)
	1.8 m (6'-0")	1.05 m (3'-6")	150 (6)



GENERAL NOTES

See Standard 602701 for details of steps.

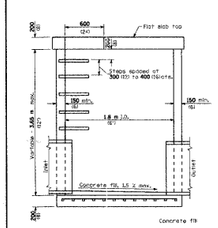
* Dimension "D" for Precast Reinforced Concrete Flat Slab Top shall be the dimension given to plus 150 mm (6").

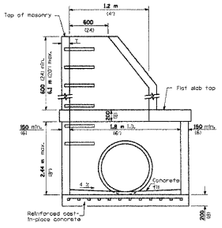
** See Standard 520901 for Optional Precast Reinforced Concrete Flat Slab Top.

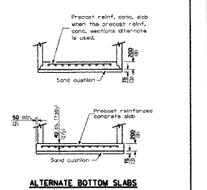
All dimensions are in millimeters (inches) unless otherwise shown.

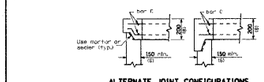
MANHOLE TYPE A

STANDARD 602401-01









ALTERNATE MATERIALS FOR WALLS	T (mm)
Concrete Masonry Units	125 (5)
Precast Reinforced Concrete Sections	100 (4)
Cast-in-Place Concrete	150 (6)

GENERAL NOTES

Joint configuration and dimensions of flat slab top shall match and fit the riser joint detail.

Lifting devices shall be approved by the Engineer.

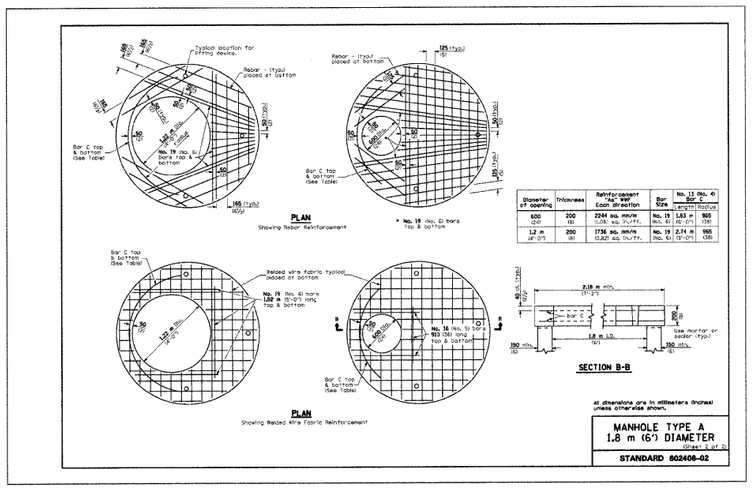
Bottom slabs shall be reinforced with a minimum of 375 mm²/m (0.46 sq. in./ft.) in both directions.

See Standard 602701 for details of manhole steps.

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

MANHOLE TYPE A
1.8 m (6') DIAMETER
(Sheet 1 of 2)

STANDARD 602406-02

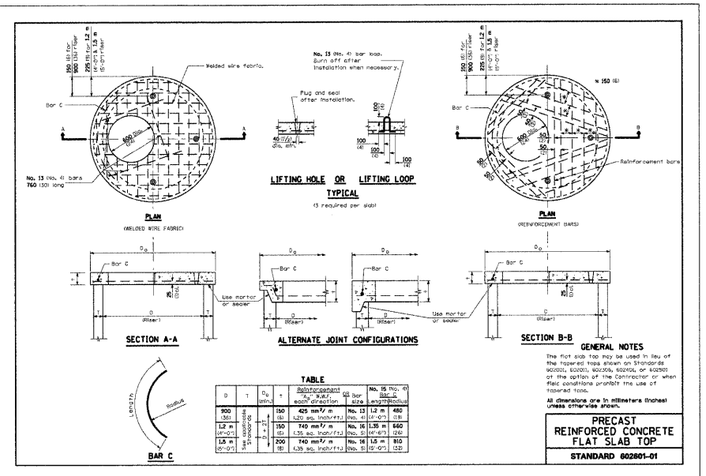


Diameter of opening	Thickness	Reinforcement *per mm per each direction	Bar Size	No. 13 (No. 4) Bar Length	Position
600 (24)	200 (8)	2244 sq. mm/m (1.06 sq. in./ft.	No. 19 (No. 6)	1.83 m (6'-0")	905 (36)
1.2 m (4'-0")	200 (8)	1736 sq. mm/m (0.820 sq. in./ft.	No. 19 (No. 6)	2.74 m (9'-0")	965 (38)

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

MANHOLE TYPE A
1.8 m (6') DIAMETER
(Sheet 2 of 2)

STANDARD 602406-02

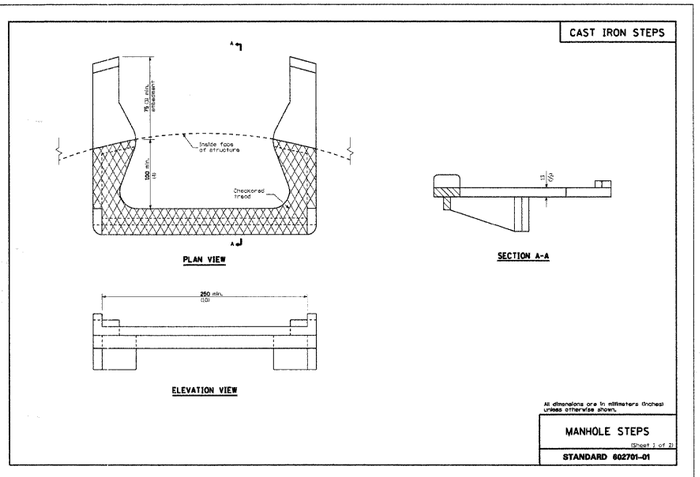


D	T	D_o	s	Reinforcement *per mm per each direction	No. 13 Bar size & length	No. 16 (No. 5) Bar size & length/Position
900 (30)	200 (8)	150 (6)	150 (6)	425 mm²/m (0.201 sq. in./ft.)	No. 13 (No. 4)	1.2 m (4'-0") 686
1.2 m (4'-0")	200 (8)	150 (6)	150 (6)	740 mm²/m (.35 sq. in./ft.)	No. 16 (No. 5)	1.35 m (4'-6") 660
1.5 m (5'-0")	200 (8)	200 (8)	200 (8)	740 mm²/m (.35 sq. in./ft.)	No. 16 (No. 5)	1.5 m (5'-0") 810

TABLE

PRECAST REINFORCED CONCRETE FLAT SLAB TOP

STANDARD 602801-01



GENERAL NOTES

This flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602201, 602301, 602401, or 602501 at the option of the Contractor or when field conditions prohibit the use of tapered tops.

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

MANHOLE STEPS
(Sheet 2 of 2)

STANDARD 602701-01

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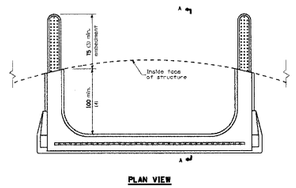
LakeCounty
Division of Transportation

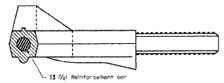
I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 4 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	188
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PLASTIC STEPS



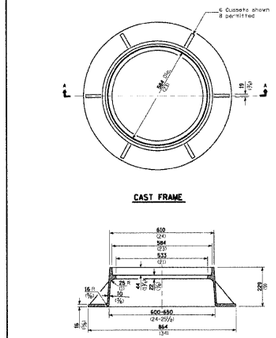


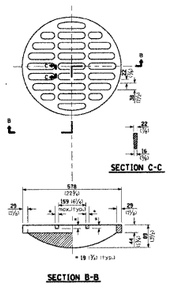


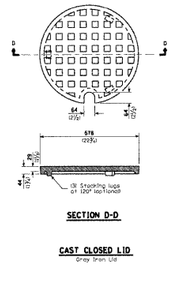
All dimensions are in millimeters (inches) unless otherwise shown.

MANHOLE STEPS
(Sheet 2 of 2)

STANDARD 602701-01



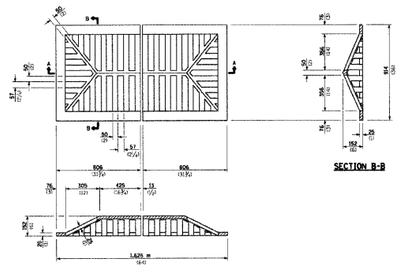




All dimensions are in millimeters (inches) unless otherwise shown.

FRAME AND LIDS TYPE 1

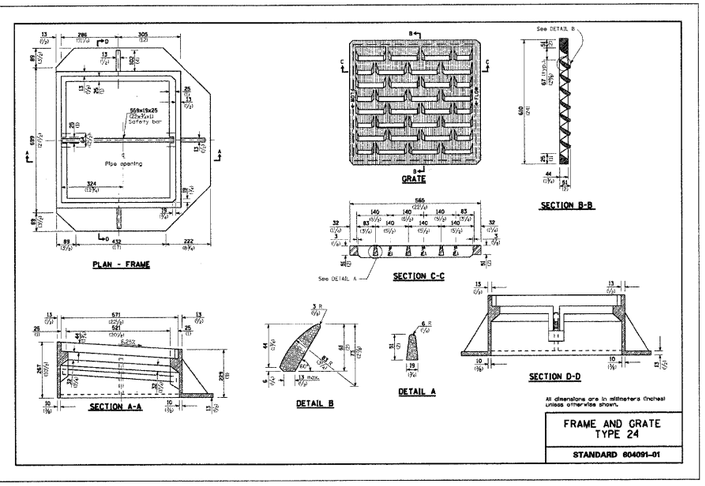
STANDARD 604001-02



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

GRATE TYPE 7

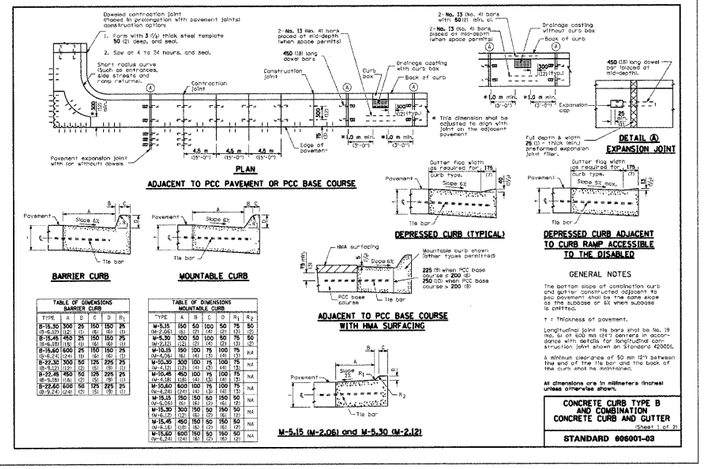
STANDARD 604031-01



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

FRAME AND GRATE TYPE 24

STANDARD 604091-01



GENERAL NOTES

The bottom slope of construction curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subslope or 6% when subslope is crowned.

T = Thickness of pavement.

Longitudinal joint ¾ bars shall be No. 19 No. 6) at 600 mm (24") centers in accordance with details for longitudinal construction joint shown on Standard 420001.

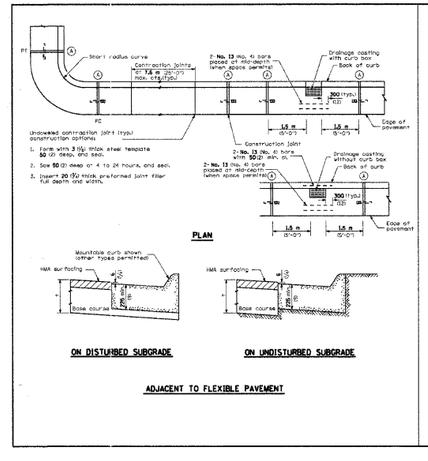
A minimum clearance of 50 mm (2") between the end of the ¾ bar and the back of the curb shall be maintained.

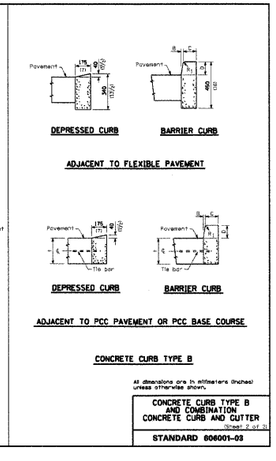
All dimensions are in millimeters (inches) unless otherwise shown.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

Sheet 1 of 2)

STANDARD 606001-03





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

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

Sheet 2 of 2)

STANDARD 606001-03

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PLOT DATE = 05/29/09

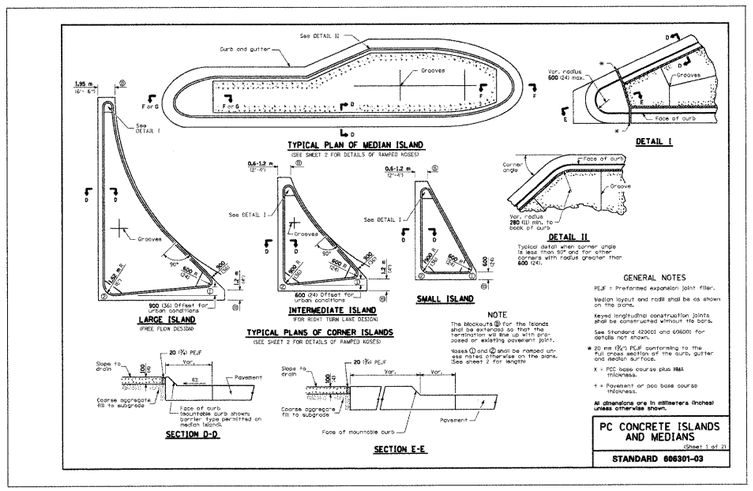
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DRAWN - SJP	REVISED -	
CHECKED - KDN	REVISED -	
DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 5 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	189
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



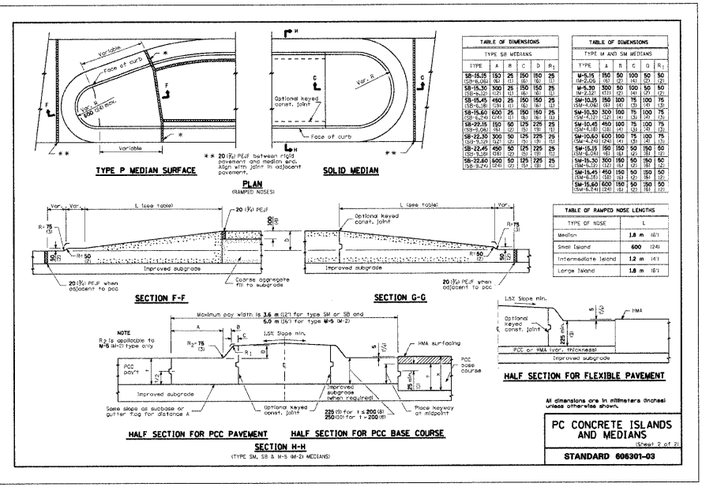


TABLE OF DIMENSIONS

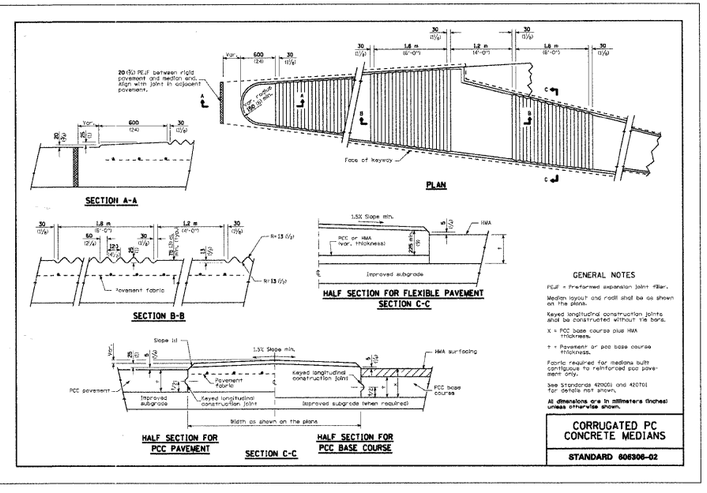
TYPE SB MEDIANS					
TYPE	A	B	C	D	R_2
SB-15.75 (SM-6.00)	150 (6)	25 (1)	150 (6)	150 (6)	25 (1)
SB-15.30 (SM-6.00)	300 (12)	25 (1)	150 (6)	150 (6)	25 (1)
SB-15.45 (SM-6.00)	450 (18)	25 (1)	150 (6)	150 (6)	25 (1)
SB-15.60 (SM-6.00)	600 (24)	25 (1)	150 (6)	150 (6)	25 (1)
SB-22.30 (SM-9.00)	300 (12)	50 (2)	175 (7)	225 (9)	25 (1)
SB-22.45 (SM-9.00)	450 (18)	50 (2)	175 (7)	225 (9)	25 (1)
SB-22.60 (SM-9.00)	600 (24)	50 (2)	175 (7)	225 (9)	25 (1)

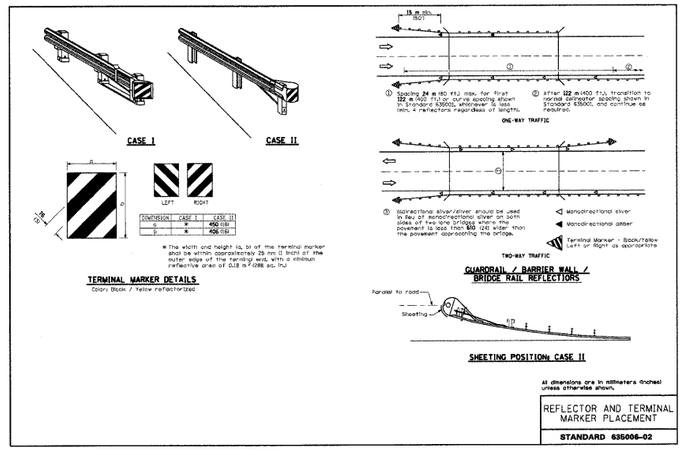
TABLE OF DIMENSIONS

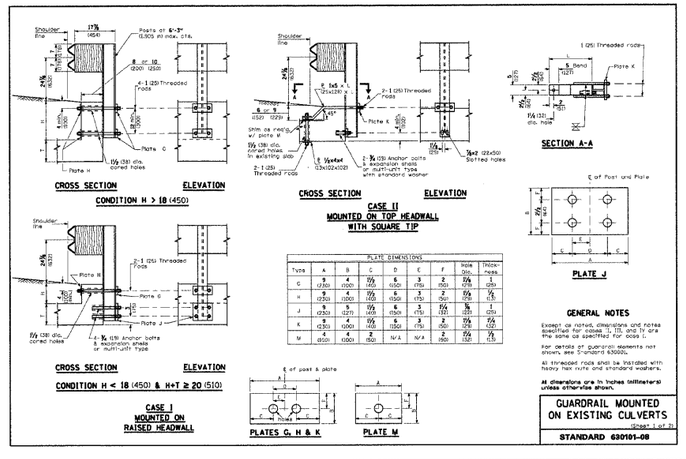
TYPE M AND SM MEDIANS					
TYPE	A	B	C	G	R_1
M-15.75 (SM-6.00)	150 (6)	50 (2)	100 (4)	50 (2)	50 (2)
M-15.30 (SM-6.00)	300 (12)	50 (2)	100 (4)	50 (2)	50 (2)
SM-15.30 (SM-6.00)	300 (12)	100 (4)	75 (3)	100 (4)	75 (3)
SM-15.45 (SM-6.00)	450 (18)	100 (4)	75 (3)	100 (4)	75 (3)
SM-15.60 (SM-6.00)	600 (24)	100 (4)	75 (3)	100 (4)	75 (3)
SM-15.75 (SM-6.00)	150 (6)	150 (6)	50 (2)	150 (6)	50 (2)
SM-15.30 (SM-6.00)	300 (12)	150 (6)	50 (2)	150 (6)	50 (2)
SM-15.45 (SM-6.00)	450 (18)	150 (6)	50 (2)	150 (6)	50 (2)
SM-15.60 (SM-6.00)	600 (24)	150 (6)	50 (2)	150 (6)	50 (2)

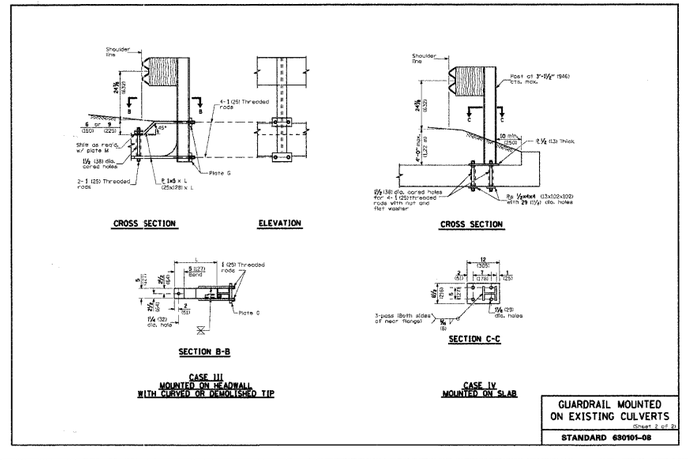
TABLE OF RAMPED NOSE LENGTHS

TYPE OF NOSE	L
Median	1.8 m (6')
Small Island	600 (24)
Intermediate Island	1.2 m (4')
Large Island	1.8 m (6')









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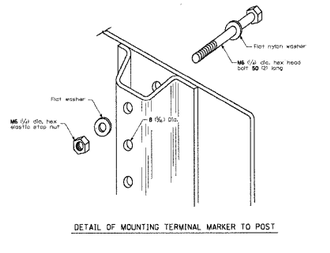
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LakeCounty
Division of Transportation

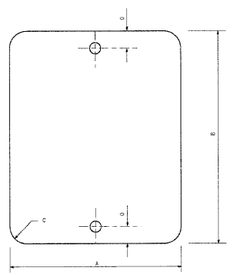
I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 6 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	190
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



DETAIL OF MOUNTING TERMINAL MARKER TO POST



STANDARD TERMINAL MARKER

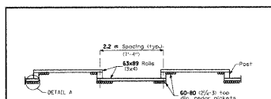
SIGN SIZE	DIMENSIONS			
	A	B	C	D
305x406 (12x16)	305 (12.0)	406 (16.0)	76 (3.0)	50 (2.0)

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

REFLECTOR MARKER AND MOUNTING DETAILS

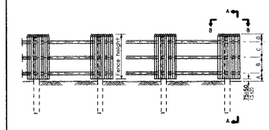
(Sheet 3 of 3)

STANDARD 635011-01



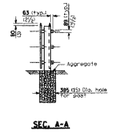
PLAN

(Facing Highway)

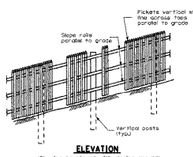


ELEVATION

Post cross sec.	FENCE HEIGHT 1.8 m (6'-0")	2.4 m (8'-0")
	140x184 (6x8)	184x184 (8x8)
Post length	3.0 m (10'-0")	4.3 m (14'-0")
Post embedment	1.2 m (4'-0")	1.8 m (6'-0")
A	380 (15)	460 (18)
B	600 (24)	870 (35)
C	600 (24)	870 (35)
D	300 (12)	380 (15)

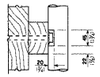


SEC. A-A



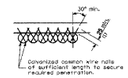
ELEVATION

(Showing treatment with sloping grounds)



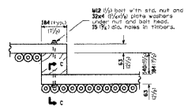
SECTION C-C

(Match pickets when required to clear washer and bolt head)



DETAIL A

(Showing typical picket to rail attachment)



SECTION B-B

(Showing typical panel to post connection at each rail)

GENERAL NOTES

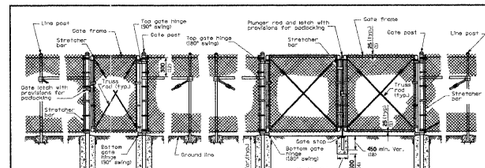
Loading was based on 130 km/h (80 mph) with 300 gust factor. Minimum allowable soil pressure = 120 kPa (1.25 tsf).

Timber sizes given are dry dressed nominal sizes.

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

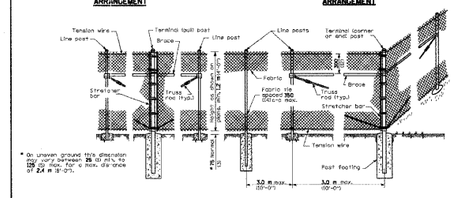
SIGHT SCREEN
CEDAR STOCKADE FENCE
TYPE S

STANDARD 641001



PEDESTRIAN GATE ARRANGEMENT

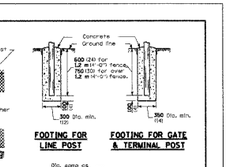
VEHICLE GATE ARRANGEMENT



PULL POST ARRANGEMENT

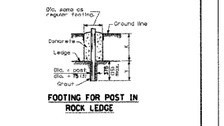
LINE POST ARRANGEMENT

CORNER OR END POST ARRANGEMENT



FOOTING FOR LINE POST

FOOTING FOR GATE & TERMINAL POST



FOOTING FOR POST IN ROCK LEDGE

GENERAL NOTES

Pull posts shall be placed at locations where the fence changes direction more than 30° to 180° (intervals between pull posts to within the ends of the fabric are stopped or midway between such posts when the distance is less than 400 m (1320') and greater than 200 m (660').

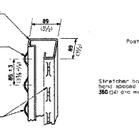
X + Y shall not exceed 600 mm (24"), 750 mm (30") or 900 mm (36"), as applicable. When X is ≤ 225 to 275 mm (9" to 11"), or 325 to 375 mm (13" to 15"), Y shall be 225 mm (9") and may be shortened or lengthened when X exceeds 275 mm (11"), 350 mm (15"), or 375 mm (15"). Y shall be decreased correspondingly.

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

CHAIN LINK FENCE

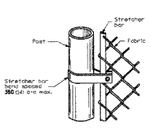
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STANDARD 664001-01

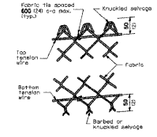


ROLL FORMED SECTION OF BRACE

ROLL FORMED SECTION OF TERMINAL & GATE POST



METHOD OF FASTENING STRETCHER BAR TO POST



METHOD OF TYING FABRIC TO TENSION WIRES

LINE POST	
Section	kg/m (lbs/ft)
Pipe Type A 48.3 O.D. (1.90")	4.05 (2.72)
Pipe Type B 48.3 O.D. (1.90")	3.39 (2.28)
Pipe Type C 48.3 O.D. (1.90")	3.36 (2.26)
H 47.6x47.6 (1.875x1.875)	4.06 (2.72)
C	2.36 (1.59)
I	3.42 (2.30)

TERMINAL POST	
Section	kg/m (lbs/ft)
Pipe Type A 60.3 O.D. (2.375)	5.43 (3.65)
Pipe Type B 60.3 O.D. (2.375)	4.83 (3.11)
Pipe Type C 60.3 O.D. (2.375)	4.80 (3.01)
Rail Formed 89.0x89.0 (3½x3½)	See detail
Sq. Tubing 83.5x83.5 (3½x3½)	6.43 (4.32)

HORIZONTAL BRACES	
Section	kg/m (lbs/ft)
Pipe Type A 42.2 O.D. (1.66)	3.39 (2.27)
Pipe Type B 42.2 O.D. (1.66)	2.72 (1.83)
Pipe Type C 42.2 O.D. (1.66)	2.71 (1.82)
H 31.5x31.5 (1.3"x1.3")	3.35 (2.25)
Rail Formed 41.3x31.8 (1⅝x1¼)	See detail

GATE FRAMES	
Section	kg/m (lbs/ft)
Pipe Type A 42.2 O.D. (1.66)	3.39 (2.27)
Pipe Type B 42.2 O.D. (1.66)	2.72 (1.83)
Pipe Type C 42.2 O.D. (1.66)	2.71 (1.82)

GATE POSTS *							
Gate Opening		W (ft.)	Pipe Type A		Sq. Tubing	Pipe Type B	
Single		Double	Size (O.D.)	kg/m (lbs/ft)	Size	Size (O.D.)	kg/m (lbs/ft)
Up to 1.2 (4')		Up to 2.5 (8')	60.3 (2.375)	5.43 (3.65)	63.5 (2½)	60.3 (2.375)	4.83 (3.11)
Over 1.2 to 2.5 (4)	(8')	Over 2.5 to 5.0 (8)	(16')	76.2 (3.000)	82.6 (3¼)	76.2 (3.000)	5.91 (3.97)
Over 2.5 to 3.6 (8)	(12')	Over 5.0 to 7.4 (16)	(24')	88.9 (3.5)	71.28 (2½)	76.2 (3.000)	13.20 (8.85)

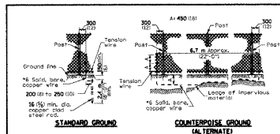
* The 89.0 x 89.0 (3½ x 3½) rail formed section as detailed may be used as gate posts for single gate up to 1.8 m (6') and double gate up to 3.6 m (12').

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

CHAIN LINK FENCE

(Sheet 2 of 3)

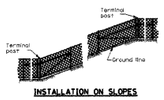
STANDARD 664001-01



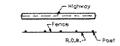
STANDARD GROUND

COUNTERPOISE GROUND (ALTERNATE)

PROTECTIVE ELECTRICAL GROUNDS



INSTALLATION ON SLOPES

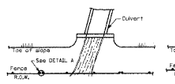


PLAN

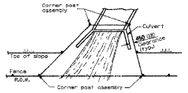
When fence line has a change in direction of 15° or more, a terminal post shall be placed as shown above.

Where angle is less than 15° and existing conditions require a terminal post, they shall be placed as directed by the Engineer.

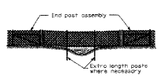
INSTALLATION AT CORNERS



PLAN AT STREAM CROSSING

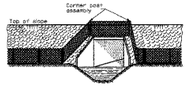


PLAN AT HEADWALL



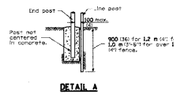
The chain link fabric shall be replaced by barbed wire strands at 300 (12) maximum centers between the double posts shown on DETAIL A which shown of the plans.

ELEVATION INSTALLATION OVER STREAM



When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a post high shoe or other device approved by the Engineer shall be used.

ELEVATION INSTALLATION AROUND HEADWALL



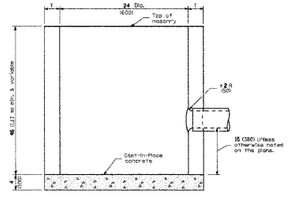
DETAIL A

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

CHAIN LINK FENCE

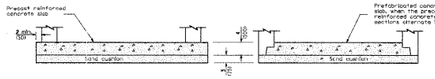
(Sheet 3 of 3)

STANDARD 664001-01



ELEVATION

ALTERNATE MATERIALS FOR WALLS	T (mm)
Precast Reinforced Concrete Section	3 (75)
Concrete Masonry Unit	5 (125)
Cast-in-Place Concrete	6 (150)
Brick Masonry	8 (200)



ALTERNATE BOTTOM SLAB

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

CATCH BASIN TYPE C

STANDARD 602011-01

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PLOT DATE = 25/29/09

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DRAWN - SJP
CHECKED - KDN
DATE - 05/29/09

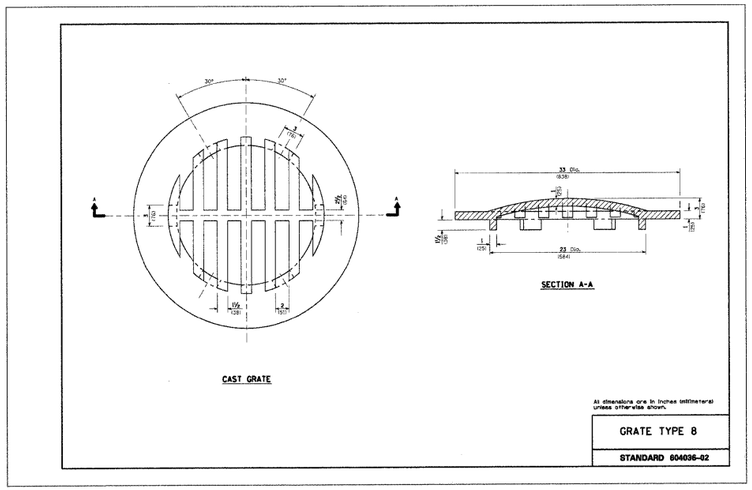
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LakeCounty
Division of Transportation

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 7 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	191
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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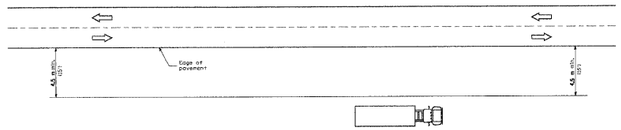
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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -

LakeCounty
Division of Transportation

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 8 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	192
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPICAL APPLICATIONS

Landscaping work
Utility work
Fencing contracts and maintenance
Cleaning culverts

GENERAL NOTES

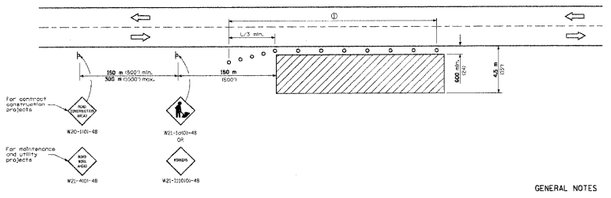
This Standard is used where all or most all vehicles, equipment, workers or their activities are more than 4,5 m (15') from the edge of pavement.

When the work operation requires that two or more work vehicles cross the traffic flow in one lane in any one hour, traffic control shall be according to Standard 701006.

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

OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4,5 m (15') AWAY

STANDARD 701001-01



TYPICAL APPLICATIONS

Utility operations
Pavement marking
Side slope changes
Guardrail installation and maintenance
Delineator installation
Landscaping operations
Tree trimming
Sign installation and maintenance

SYMBOLS

Work area
Sign
Cone, drum or barricade

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 8 m (25') centers for L/3 distance, and at 15 m (50') centers through the remainder of the work area.

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 4,5 m (15') to 600 (24) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
	Metric	English
70 km/h (40 mph) or less	$L = \frac{WS^2}{155}$	$L = \frac{WS^2}{60}$
80 km/h (45 mph) or greater	L=0.65WS	L=WS

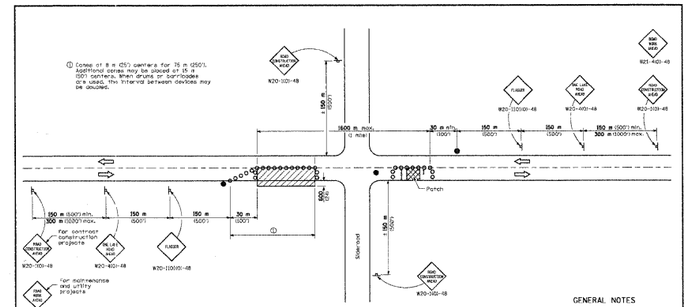
W = Width of offset in meters (feet).

S = Normal posted speed km/h (mph).

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

OFF-RD OPERATIONS, 2L, 2W, 4,5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE

STANDARD 701006-02



SYMBOLS

Work area
Sign
Barricade or drum
Cone, drum or barricade
Flagger with traffic control sign

TYPICAL APPLICATIONS

Isolated patching
Utility operations
Storm sewer
Culverts
Cable placement

GENERAL NOTES

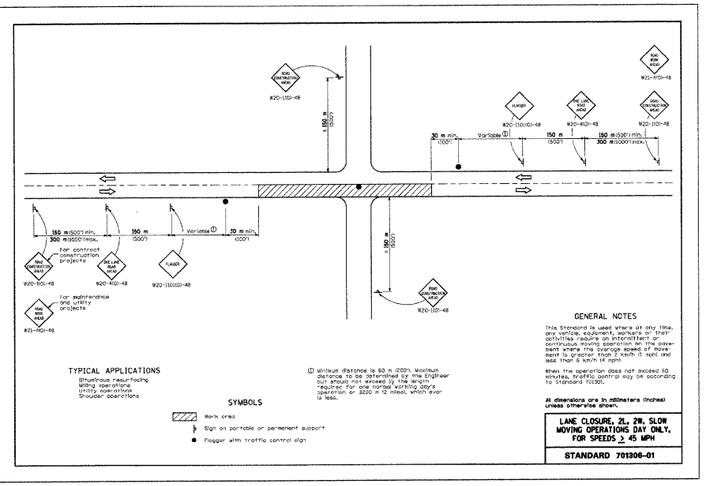
This Standard is used where all or most all vehicles, equipment, workers or their activities will encroach in the area between the center line and a line 600 mm (24") outside the edge of pavement for daylight operation.

When the distance between successive work areas exceeds 600 m (2000'), additional warning signs, flaggers, and taper shall be placed as shown.

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

LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH

STANDARD 701201-02



TYPICAL APPLICATIONS

Bituminous resurfacing
Milling operations
Utility operations
Shoulder operations

SYMBOLS

Work area
Sign on portable or permanent support
Flagger with traffic control sign

GENERAL NOTES

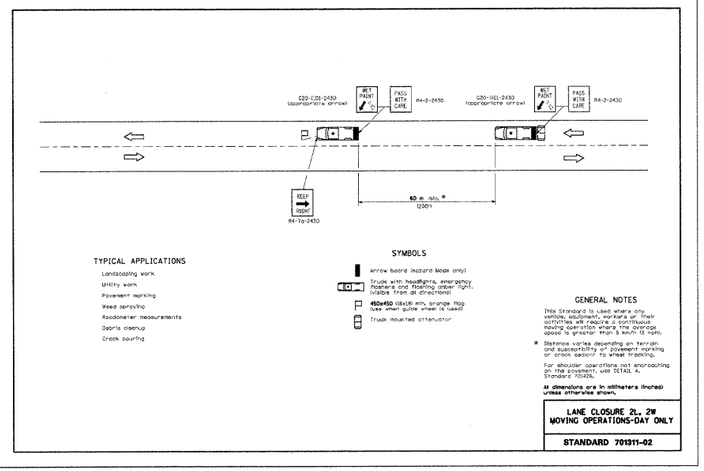
This Standard is used where any one time, any vehicle, equipment, workers or their activities are working within the pavement where the average speed of movement is greater than 3 km/h (2 mph) and less than 8 km/h (4 mph).

When the operation does not exceed 60 minutes, traffic control may be according to Standard 701501.

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

LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH

STANDARD 701306-01



TYPICAL APPLICATIONS

Landscaping work
Utility work
Pavement marking
Weed spraying
Roadometer measurements
Debris cleanup
Creek pouring

SYMBOLS

Arrow board (hazard blade only)
Truck with headlights, emergency flashers and flashing amber light, visible from all directions
450x450 (18x18 mm, orange flag tree when guide vane is used)
Truck mounted attenuator

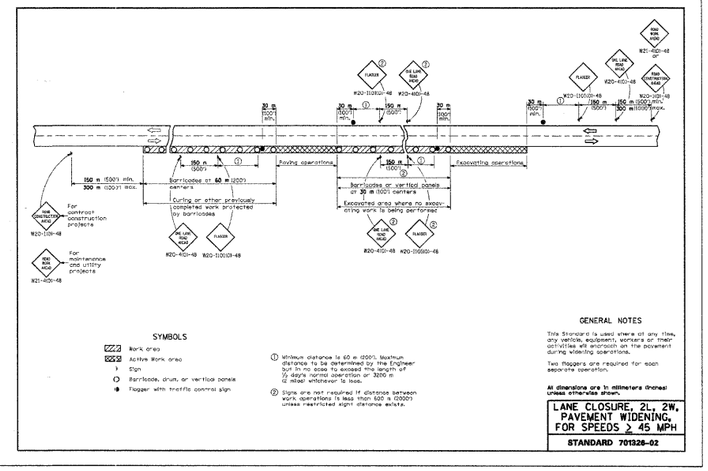
* Distance varies depending on terrain and susceptibility of pavement marking or crash geometry to wheel tracking.

For shoulder operations not encroaching on the pavement, use DETAIL A, Standard 701426.

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

LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY

STANDARD 701311-02



SYMBOLS

Work area
Active Work area
Sign
Barricade, drum, or vertical panels
Flagger with traffic control sign

GENERAL NOTES

This Standard is used where any one time, any vehicles, equipment, workers or their activities will encroach on the pavement during widening operations.

Two flaggers are required for each separate operation.

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

LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH

STANDARD 701326-02

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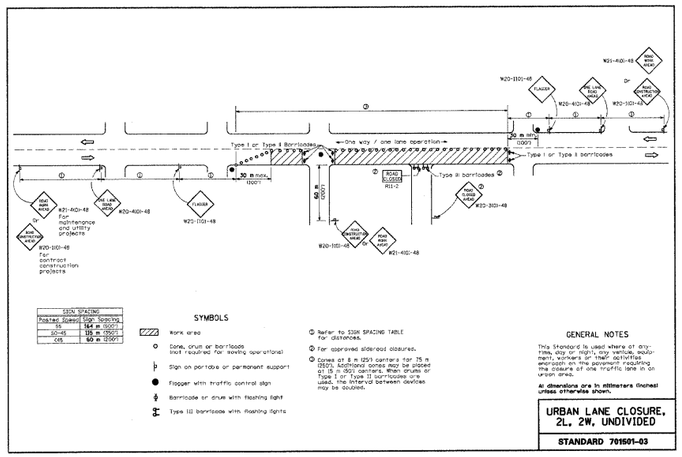
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DATE - 05/29/09 | REVISED -

LakeCounty
Division of Transportation

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 9 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	193
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SIGN SPACING	
Posted Speed	Sign Spacing
55	164 m (500')
50-45	135 m (350')
≤35	80 m (250')

SYMBOLS

- Work area
- Cone, drum or barricade (not required for leveling operations)
- Sign on portable or permanent support
- Flagger with traffic control sign
- Barricade or drum with flashing light
- Type III barricade with flashing lights

① Refer to SIGN SPACING TABLE for distances.
② For approved sliderail closures.
③ Cones at 8 m (25') centers for 75 m (250'). Additional cones may be placed at 15 m (50') centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.

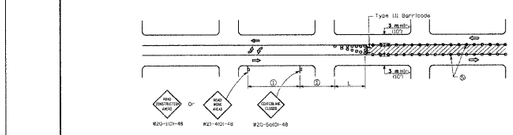
GENERAL NOTES

This Standard is used where all daytime, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.

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

URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED

STANDARD 701501-03



CASE I

(Signs required for both directions)

SIGN SPACING	
Posted Speed	Sign Spacing
55 (50)	150 m (500')
50-45 (35)	115 m (350')
≤35	60 m (200')

SYMBOLS

- Arrow board
- Work area
- Barricade or drum with steady burning nondirectional light
- Barricade or drum without flashing light
- Flagger with traffic control sign
- Cone, drum or barricade (Cones for daytime use only)
- Sign on portable or permanent support

① Refer to SIGN SPACING TABLE for distances.
② Required for speeds ≥ 70 km/h (40 mph).
③ Required if work exceeds 164 m (500') or 1 block.
④ For speeds exceeding 80 km/h (45 mph) contact the District Operations Office for approval of sign spacing.
⑤ Cones at 8 m (25') centers for 75 m (250'). Additional cones may be placed at 15 m (50') centers. When drums or Type I or II barricades are used, the interval between devices may be doubled.
⑥ For approved sliderail closures.

GENERAL NOTES

This Standard is used in cases one side of an urban, two lane, two way roadway with a bidirectional turn lane.

Case I applies when no workers are present. When workers are present, two lanes shall be closed and traffic control shall be according to Standard 701501.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
70 km/h (40 mph) or less	Metric: $L = \frac{WS^2}{150}$	(English): $L = \frac{WS^2}{60}$
80 km/h (45 mph) or greaters	$L = 0.65(WS)$	$L = 0.6(WS)$

W = Width of offset in meters (feet).

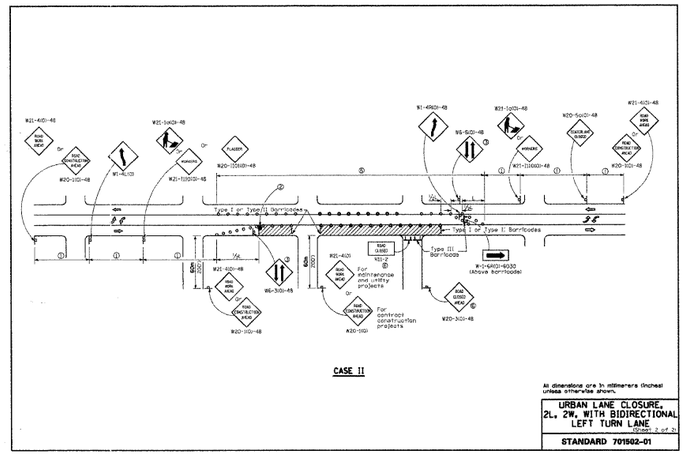
S = Normal posted speed km/h (mph).

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

URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 1 of 2)

STANDARD 701502-01



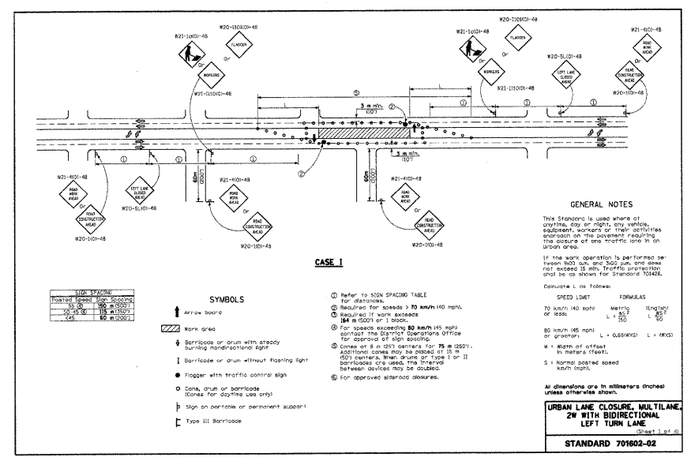
CASE II

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

URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 2 of 2)

STANDARD 701502-01



SIGN SPACING	
Posted Speed	Sign Spacing
55 (50)	150 m (500')
50-45 (35)	115 m (350')
≤35	60 m (200')

CASE I

SYMBOLS

- Arrow board
- Work area
- Barricade or drum with steady burning nondirectional light
- Barricade or drum without flashing light
- Flagger with traffic control sign
- Cone, drum or barricade (Cones for daytime use only)
- Sign on portable or permanent support
- Type III barricade

GENERAL NOTES

This Standard is used where all daytime, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.

If the work operation is performed between 1600 veh. and 300 veh. and does not exceed 15 min. Traffic protection shall be as shown for Standard 701426.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
70 km/h (40 mph) or less	Metric: $L = \frac{WS^2}{150}$	(English): $L = \frac{WS^2}{60}$
80 km/h (45 mph) or greaters	$L = 0.65(WS)$	$L = 0.6(WS)$

W = Width of offset in meters (feet).

S = Normal posted speed km/h (mph).

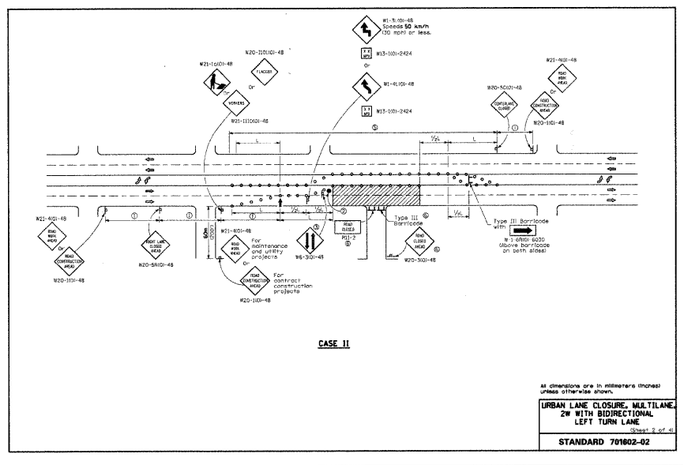
① Refer to SIGN SPACING TABLE for distances.
② Required for speeds ≥ 70 km/h (40 mph).
③ Required if work exceeds 164 m (500') or 1 block.
④ For speeds exceeding 80 km/h (45 mph) contact the District Operations Office for approval of sign spacing.
⑤ Cones at 8 m (25') centers for 75 m (250'). Additional cones may be placed at 15 m (50') centers. When drums or Type I or II barricades are used, the interval between devices may be doubled.
⑥ For approved sliderail closures.

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

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 1 of 4)

STANDARD 701602-02



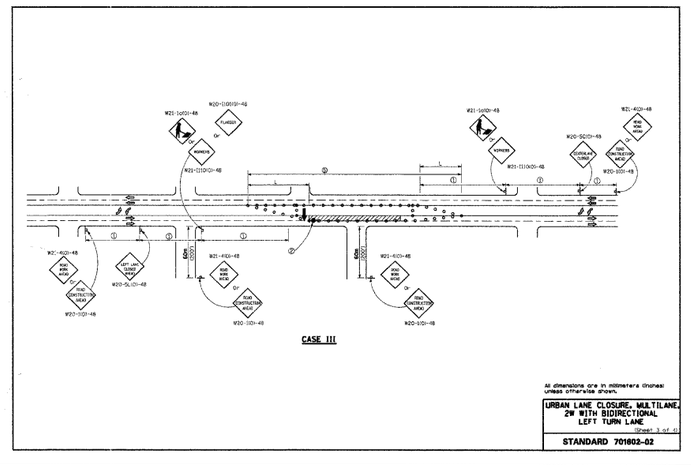
CASE II

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

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 2 of 4)

STANDARD 701602-02



CASE III

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

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 3 of 4)

STANDARD 701602-02

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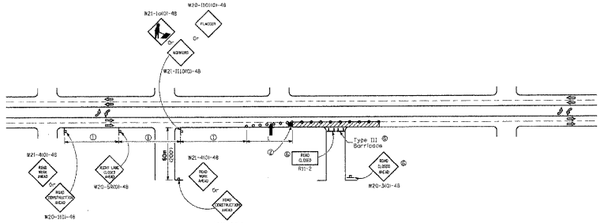
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LakeCounty
Division of Transportation

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 10 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



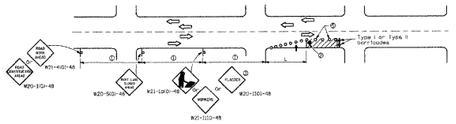
CASE IV

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

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 4 of 4)

STANDARD 701602-02



SIGN SPACING	
Posted Speed	Sign Spacing
50 km/h (30 mph) or less	120 m (400')
60-65 km/h (40-45 mph)	150 m (500')
≥70 km/h (≥50 mph)	300 m (1000')

SYMBOLS

- Arrow board
- Cone, drum or barricade
- Sign on portable or permanent support
- Work area
- Barricade or drum with flashing light
- Type III barricade with flashing lights
- Flagger with traffic control sign.

① Refer to SIGN SPACING TABLE for distances.

② Required for speeds > 40 MPH

③ Use flagger sign only when flagger is present.

④ For approved sidewalk closures.

⑤ Cones at 5 m (20') centers for 75 m (250'). Additional cones may be placed at 10 m (40') centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.

GENERAL NOTES

This Standard is used where at anytime, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one or more traffic lanes in an urban area.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
70 km/h (45 mph) or less	Metric: $L = \frac{WS^2}{155}$	English: $L = \frac{WS^2}{60}$
80 km/h (45 mph) or greater:	$L = 0.65(WS)$	$L = WS$

W = Width of offset in meters (feet).

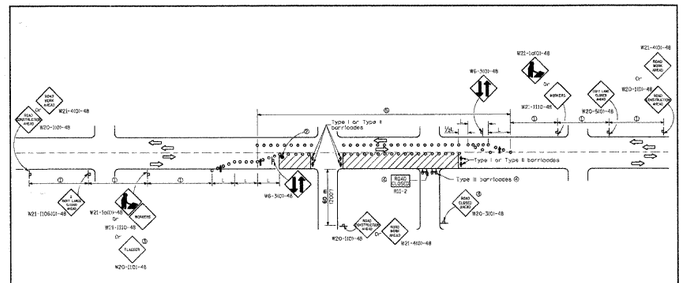
S = Normal posted speed km/h (mph).

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

URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN

(Sheet 1 of 2)

STANDARD 701606-04

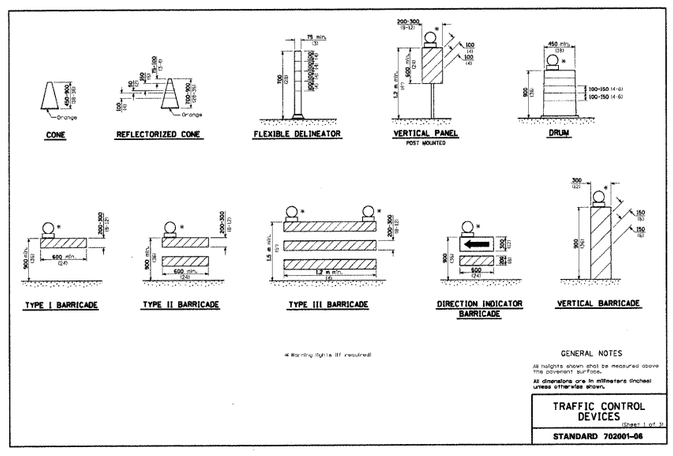


All dimensions are in millimeters (inches) unless otherwise shown.

URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN

(Sheet 2 of 2)

STANDARD 701606-04



GENERAL NOTES

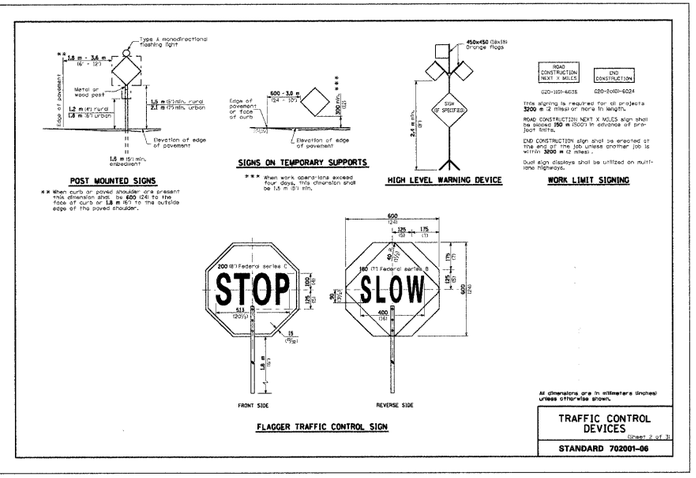
All heights shown shall be measured above the pavement surface.

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

TRAFFIC CONTROL DEVICES

(Sheet 1 of 3)

STANDARD 702001-06

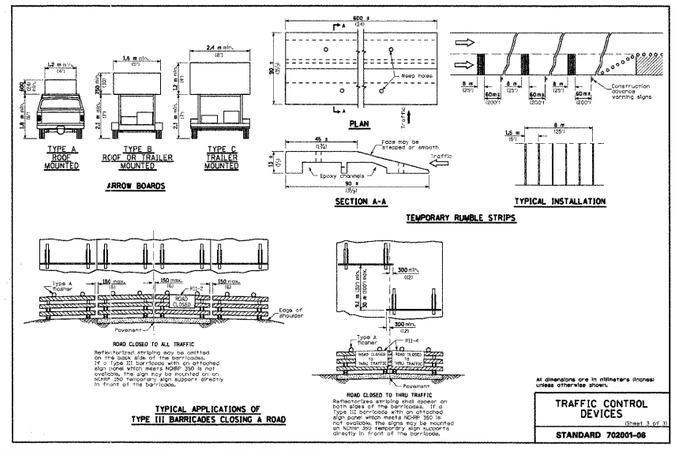


All dimensions are in millimeters (inches) unless otherwise shown.

TRAFFIC CONTROL DEVICES

(Sheet 2 of 3)

STANDARD 702001-06



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

TRAFFIC CONTROL DEVICES

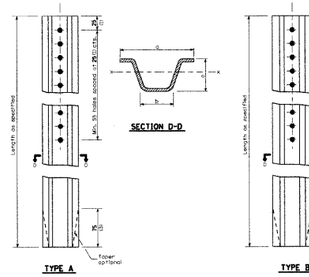
(Sheet 3 of 3)

STANDARD 702001-06

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CMT ©Copyright CMT, Inc. CRAWFORD, MURPHY & TILLY, INC. CONSULTING ENGINEERS License No. 184-000613	USER NAME = Steve Prange	DESIGNED - SJP	REVISED -	LakeCounty Division of Transportation	**I.D.O.T. STANDARD DRAWINGS**
		DRAWN - SJP	REVISED -		
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -		
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -		SCALE: N.T.S. | SHEET NO. 11 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	195
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



		a	b	c	S_{min} mm^3 (in^3)	kg/m (lbs./ft.)
TYPE A	Steel	78 (3¹⁄₁₆)	32 (1¹⁄₄)	37 (1⁷⁄₁₆)	3,664 (0.2235)	2.58 (1.735)
	Aluminum	85 (3⅜)	41 (1⅝)	48 (1⅞)	7,128 (0.435)	1.34 (0.90)
TYPE B	Steel	81 (3³⁄₁₆)	32 (1¼)	38 (1½)	5,588 (0.341)	4.46 (3.00)
	Aluminum	118 (4⅝)	57 (2¼)	60 (2⅜)	14,557 (0.888)	1.83 (1.30)

GENERAL NOTES

Dimensions shown for cross sections are minimum.

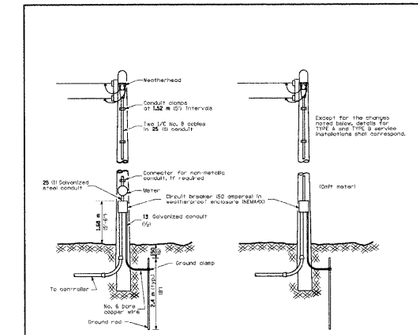
All holes are 10 mm (3/8") diameter.

S_{min} is the minimum section modulus about the x-x axis of the post as shown. For posts in which holes are punched or drilled for more than half their length, S_{min} shall be computed for the net section.

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

METAL POSTS FOR SIGNS, MARKERS & DELINEATORS

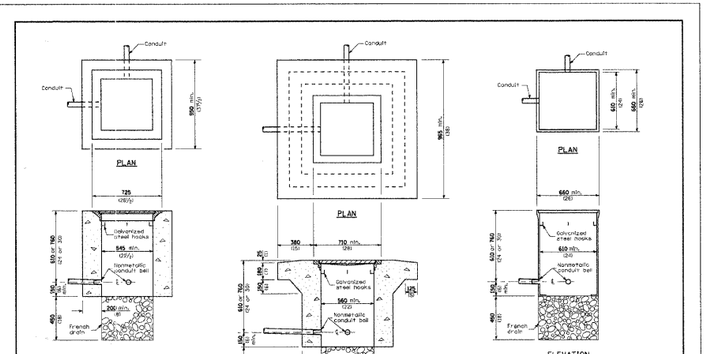
STANDARD 720011



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

ELECTRICAL SERVICE INSTALLATION DETAILS

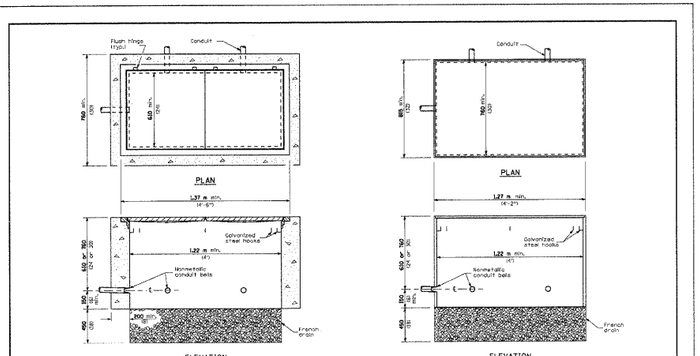
STANDARD 805001



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

HANDHOLES

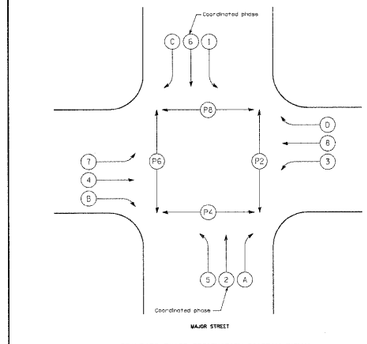
STANDARD 814001-01



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

DOUBLE HANDHOLES

STANDARD 814006-01

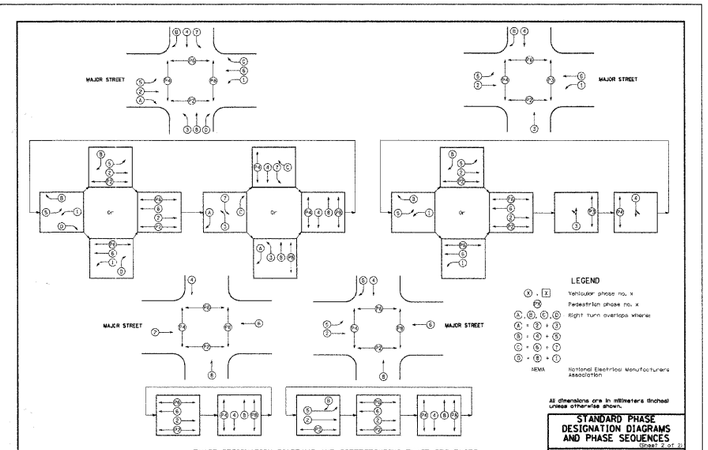


All dimensions are in millimeters (inches) unless otherwise shown.

STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES

Sheet 1 of 2

STANDARD 857001



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

STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES

Sheet 2 of 2

STANDARD 857001

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PLOT SCALE = 28.0000 ' / IN.
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DESIGNED - SJP	REVISED -	
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CHECKED - KDN	REVISED -	
DATE - 05/29/09	REVISED -	

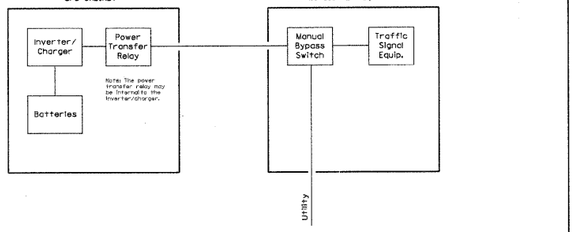
LakeCounty Division of Transportation

I.D.O.T. STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 12 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	196
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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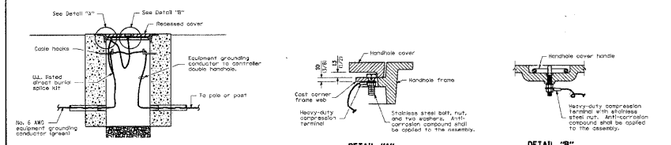


SINGLE LINE BLOCK DIAGRAM

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

UNINTERRUPTABLE POWER SUPPLY (UPS)

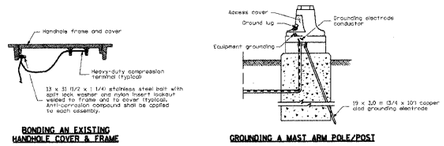
STANDARD 862001



BONDING A HANDHOLE COVER & FRAME

DETAIL "A"

DETAIL "B"



BONDING AN EXISTING HANDHOLE COVER & FRAME

GROUNDING A MAST ARM POLE/POST



HEAVY-DUTY COMPRESSION TERMINAL

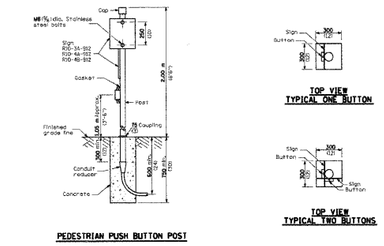


HEAVY-DUTY GROUND ROD CLAMP

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

TRAFFIC SIGNAL GROUNDING & BONDING

STANDARD 873001-01



PEDESTRIAN PUSH BUTTON POST

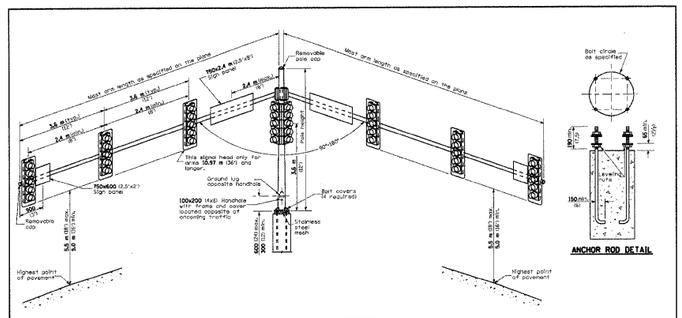
TOP VIEW TYPICAL ONE BUTTON

TOP VIEW TYPICAL TWO BUTTONS

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

PEDESTRIAN PUSH BUTTON POST

STANDARD 878001



MAST ARM LENGTH	BOLT CIRCLE	ANCHOR ROD SIZE
4.87 m thru 6.10 m (16' thru 20')	450 (18)	38 x 1.5 m (1.5 x 60)
6.71 m thru 9.14 m (22' thru 30')	450 (18)	44 x 2.0 m (1.75 x 84)
9.75 m thru 11.60 m (32' thru 38')	450 (18)	51 x 2.30 m (2.0 x 90)
12.20 m thru 15.80 m (40' thru 52')	535 (21)	64 x 2.30 m (2.5 x 90)

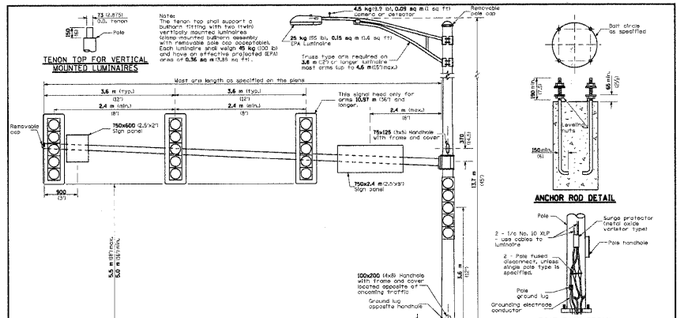
GENERAL NOTES

Signal heads, sign panels, and other attachments are shown for minimum design loading purposes only. Each signal head shall weigh 36 kg (80 lb) and have a projected area of 1.37 sq m (14.7 sq ft).

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

STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS

STANDARD 857006-02



MAST ARM LENGTH	BOLT CIRCLE	ANCHOR ROD SIZE
4.87 m thru 6.10 m (16' thru 20')	380 (15)	38 x 1.5 m (1.5 x 60)
6.71 m thru 9.14 m (22' thru 30')	450 (18)	38 x 1.5 m (1.5 x 60)
9.75 m thru 12.20 m (32' thru 40')	450 (18)	44 x 2.10 m (1.75 x 84)
12.80 m thru 16.80 m (42' thru 55')	535 (21)	44 x 2.10 m (1.75 x 84)

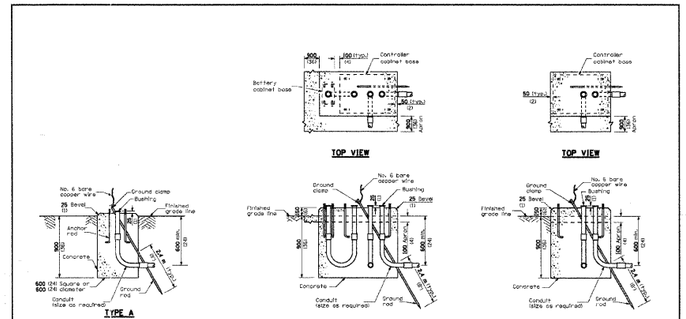
GENERAL NOTES

Signal heads, sign panels, and other attachments are shown for minimum design loading purposes only. Each signal head shall weigh 36 kg (80 lb) and have a projected area of 1.37 sq m (14.7 sq ft).

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

STEEL COMBINATION MAST ARM ASSEMBLY AND POLE

STANDARD 877011-02



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

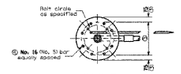
CONCRETE FOUNDATION DETAILS (Sheet 1 of 2)

STANDARD 878001-05

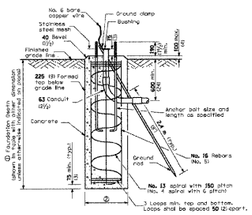
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CMT ©Copyright CMT, Inc. CRAWFORD, MURPHY & TILLY, INC. CONSULTING ENGINEERS License No. 184-000613	USER NAME = Steve Prange	DESIGNED - SJP	REVISED -	LakeCounty Division of Transportation	**I.D.O.T. STANDARD DRAWINGS**
		DRAWN - SJP	REVISED -		
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -		
	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -		SCALE: N.T.S. | SHEET NO. 13 OF 14 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	197
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TOP VIEW



TYPE E

For standard and combination mast arm assemblies, tenon arm assemblies with dual arms require a special foundation design.

Mast Arm Length	① Foundation Depth*	② Foundation Diameter	③ Sand Diameter	④ Quantity of No. 16 (#5) Bars
Less than 6.1 m (20')	3.0 m (10'-0")	750 (30)	600 (24)	8
Greater than or equal to 6.1 m (20') and less than 12.2 m (40')	4.2 m (13'-6")	750 (30)	600 (24)	8
Greater than or equal to 12.2 m (40') and less than 15.2 m (50')	3.4 m (11'-0")	900 (36)	750 (30)	12
Greater than or equal to 15.2 m (50') and up to 16.8 m (55')	4.6 m (15'-0")	900 (36)	750 (30)	12

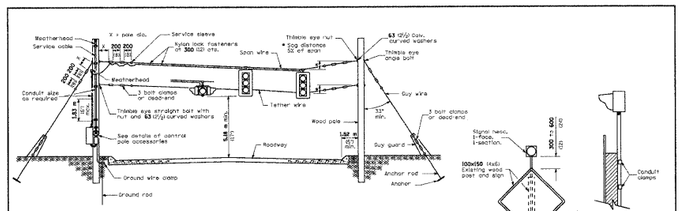
* These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Uncontrolled Compressive Strength (q_u) > 300 kPa (6.6 tsf). This strength shall be verified by boring data prior to construction or when nesting by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.

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

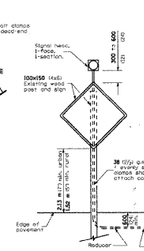
CONCRETE FOUNDATION DETAILS

(Sheet 7 of 21)

STANDARD 878001-05

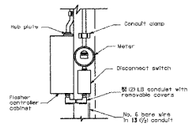


SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON

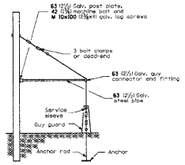


MOUNTING DETAIL

POST MOUNTED FLASHING BEACON



CONTROL POLE DETAIL

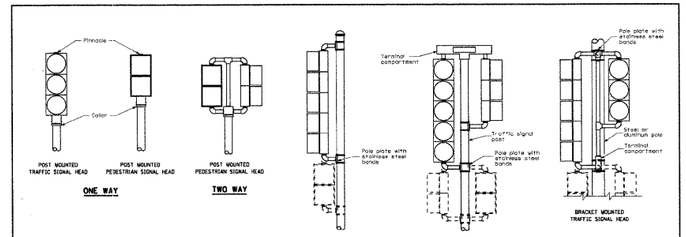


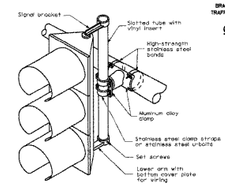
SIDEWALK GUY DETAIL

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

SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION

STANDARD 880001





STEEL MAST ARM MOUNTING

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

TRAFFIC SIGNAL MOUNTING DETAILS

STANDARD 880006

FILE NAME = I:\lakeco\822481\draw\sheets\STD_19.dgn

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	DRAWN - SJP	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

I.D.O.T. STANDARD DRAWINGS

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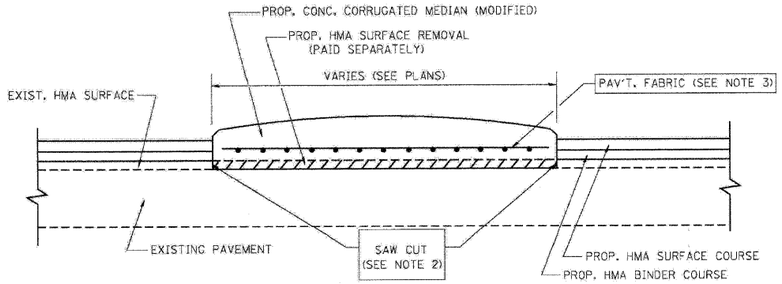
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	198
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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CONTRACT NO.

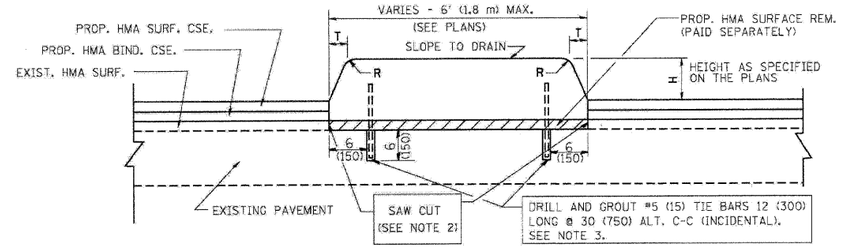
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:
1. CORRUGATED MEDIAN (MODIFIED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE PORTIONS OF STATE STANDARD 606306.
2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED. SAW CUT WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)
3. PAVEMENT FABRIC WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)

DETAILS FOR CORRUGATED MEDIAN (MODIFIED)

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT (SQUARE METER) FOR "CORRUGATED MEDIAN (MODIFIED)"



H	R	T
6(150)	1(25)	1(25)
9(225)	1(25)	2(50)

NOTES:
1. CONCRETE MEDIAN TYPE SB (DOWELLED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STATE STANDARD 606301 AND SECTION 606 OF THE STANDARD SPECIFICATIONS.
2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED. SAW CUT WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"
3. FOR MEDIAN WIDTH LESS THAN 4' (1.2 m) USE ONE ROW OF #5 (15) BARS @ 30 (750) C-C ALONG THE MEDIAN CENTERLINE. TIE BARS WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"

DETAILS FOR CONCRETE MEDIAN TYPE SB (DOWELLED)

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT (SQUARE METER) FOR "CONCRETE MEDIAN TYPE SB (DOWELLED)"

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

REVISIONS	
NAME	DATE
M. DE YONG	05/14/90
M. DE YONG	06/13/90
M. DE YONG	06/14/90
M. DE YONG	06/20/90
M. DE YONG	09/21/90
M. DE YONG	10/12/90
R. SHAH	09/05/94
R. SHAH	10/25/94
E. GOMEZ	08/28/00
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS FOR
CONCRETE MEDIAN TYPE SB (DOWELLED)
CORRUGATED MEDIAN (MODIFIED)

SCALE: VERT. NONE HORIZ.
PLOT DATE: 10/31/2006
DRAWN BY
CHECKED BY

BD600-02 (BD-5)
REVISION DATE: 01/01/07

PLOT DATE = 10/31/2006
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USER NAME = Regido

FILE NAME = I:\lakeco\88224B1\drawsheets\STD_22.dgn

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USER NAME = Steve Prange
PLOT SCALE = 20.0000 ' / IN.
PLOT DATE = 05/29/09

DESIGNED - SJP		REVISED -
DRAWN - SJP		REVISED -
CHECKED - KDN		REVISED -
DATE - 05/29/09		REVISED -

LakeCounty Division of Transportation

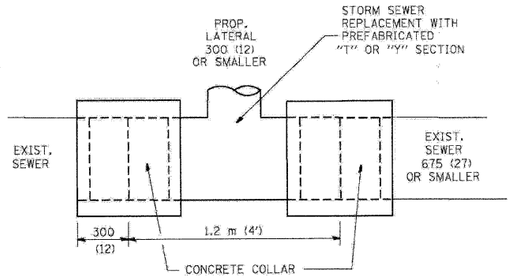
I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 3 OF 8 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	201
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

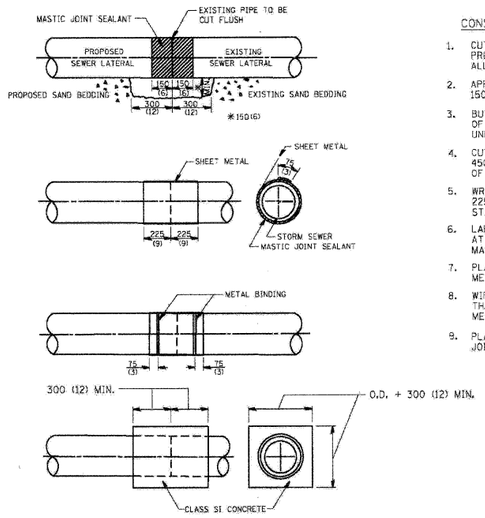
CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 675 (27) OR SMALLER

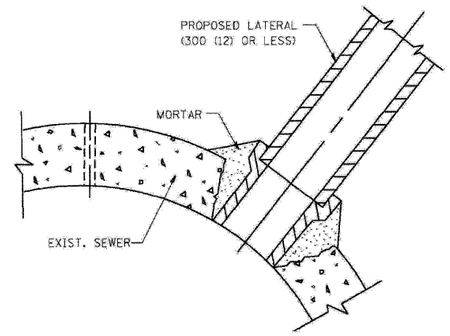


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT, BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 150 (6) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 300 x 150 (12 x 6) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 450 (18) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 75 (3) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 225 (9) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 75 (3) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

I THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 675 (27) OR SMALLER SEE DETAIL "A" AND "B".

B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

REVISIONS	
NAME	DATE
M. DE YONG	07/25/90
M. DE YONG	02/05/92
M. DE YONG	05/08/92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	06/12/96

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER

SCALE: VERT.
HORIZ.
DATE: 2/15/2006

DRAWN BY
CHECKED BY

BD500-01 (BD-7)
REVISION DATE: 06/12/96

PLOT DATE = 2/15/2006
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USER NAME = pegilanob

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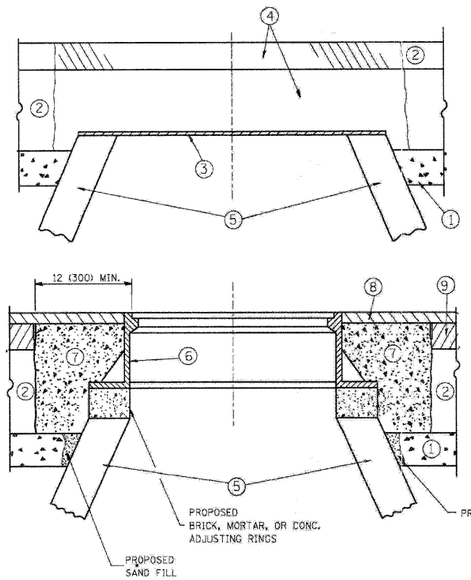
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		DRAWN - SJP	REVISED -	I.D.O.T. DISTRICT 1 STANDARD DRAWINGS
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	PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

SCALE: N.T.S. | SHEET NO. 4 OF 8 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	202
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.

B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.

C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.

D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.

B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.

C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

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

LEGEND

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

NOTES:

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

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

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

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

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

LOCATION OF STRUCTURES:

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

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

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

REVISIONS NAME	DATE
R. SHAH	10/25/94
R. SHAH	01/30/95
R. SHAH	03/10/95
A. ABBAS	03/21/97
R. WIEDEMAN	05/14/04
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: VERT. NONE HORIZ.
PLOT DATE: 10/31/2006
DRAWN BY
CHECKED BY

BD600-03 (BD-8)
REVISION DATE: 01/01/07

PLOT DATE = 10/31/2006
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USER NAME = Regis

FILE NAME = I:\lakeco\082248\drawings\STD_24.dgn

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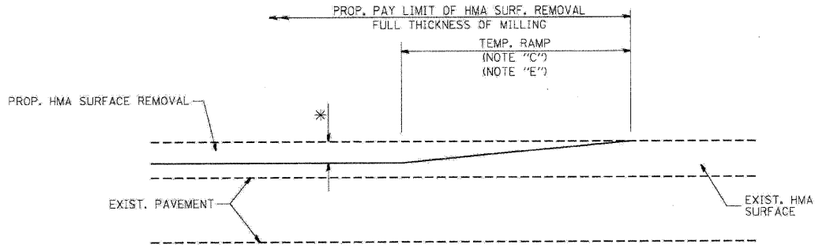
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	DRAWN - SJP	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 5 OF 8 SHEETS | STA. N/A | TO STA. N/A

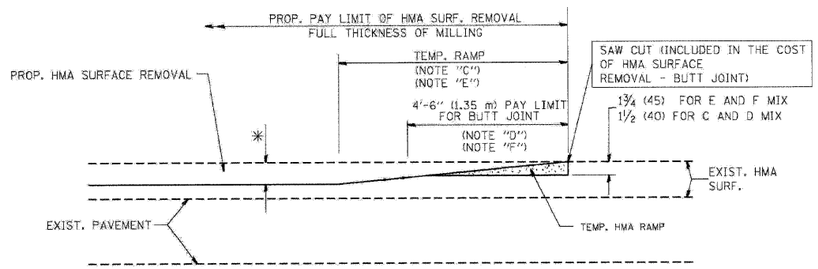
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	203
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

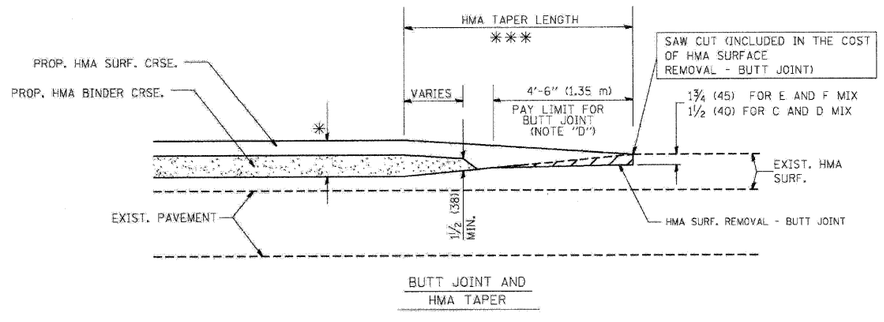


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2

TYPICAL TEMPORARY RAMP



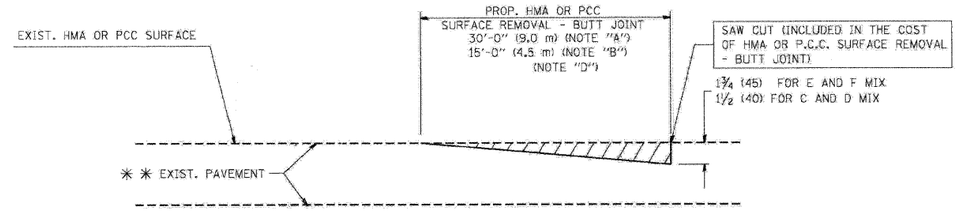
BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

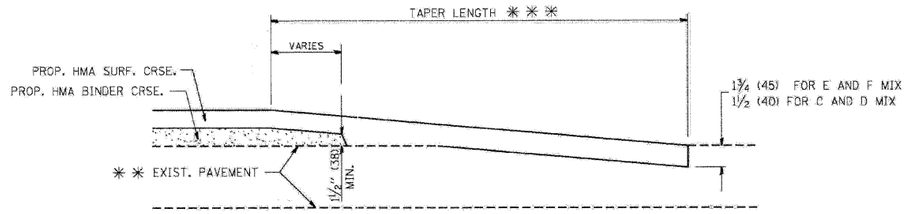
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USER NAME = Ingleb

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

* * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

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

BASIS OF PAYMENT:

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

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: VERT. NONE HORIZ.
PLOT DATE: 10/31/2006
DRAWN BY
CHECKED BY

BD400-05 (V)=BD32)
REVISION DATE: 01/01/07

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PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

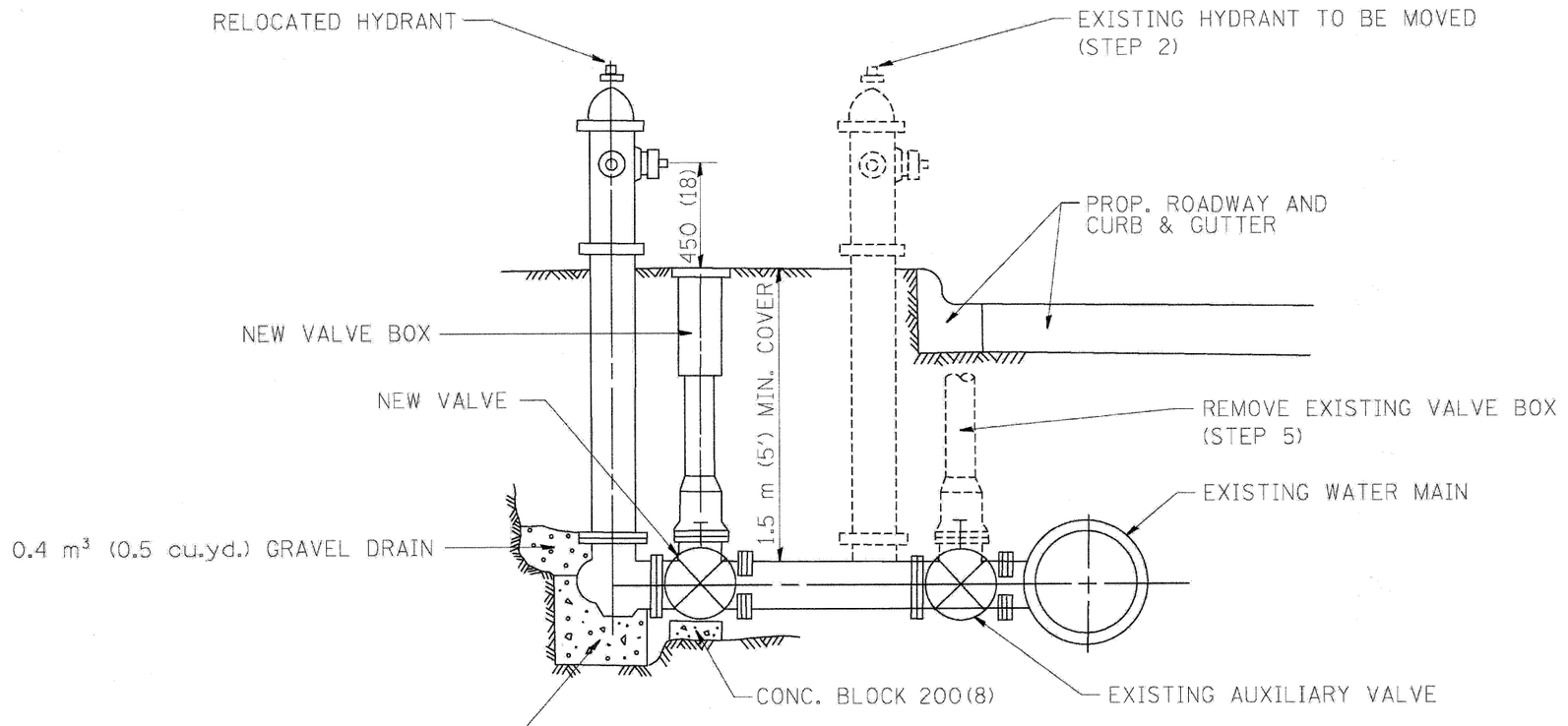
I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 6 OF 8 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	204
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SEQUENCE OF CONSTRUCTION:

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

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

FIRE HYDRANT TO BE MOVED

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USER NAME = spgulenoski

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

REVISIONS	
NAME	DATE
R. SHAH	09/09/94
R. SHAH	10/25/94

ILLINOIS DEPARTMENT OF TRANSPORTATION

FIRE HYDRANT TO BE MOVED

SCALE: VERT.
HORIZ.
DATE: 2/15/2006

DRAWN BY
CHECKED BY

BD500-03 (BD-36)

REVISION DATE: 10/25/94

FILE NAME = I:\Lakeco\082240\draw\sheets\STD_26.dgn

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LakeCounty
Division of Transportation

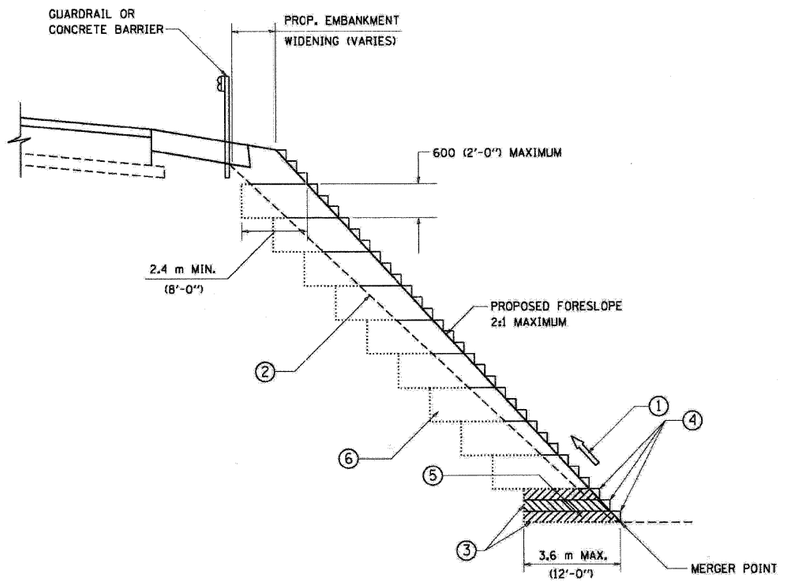
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SCALE: N.T.S. | SHEET NO. 7 OF 8 SHEETS | STA. N/A | TO STA. N/A

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1016	02-00110-12-WR	LAKE	206	205
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

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

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

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL FOR EMBANKMENT WIDENING

SCALE: VERT.
HORIZ.
DATE: 2/15/2006

DRAWN BY: CADD
CHECKED BY: S.E.B.

BD-51

REVISION DATE: 6-16-2004

PLOT DATE = 2/15/2006
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	DRAWN - SJP	REVISED -	
PLOT SCALE = 20.0000 '/ IN.	CHECKED - KDN	REVISED -	
PLOT DATE = 05/29/09	DATE - 05/29/09	REVISED -	

LakeCounty
Division of Transportation

I.D.O.T. DISTRICT 1 STANDARD DRAWINGS

SCALE: N.T.S. | SHEET NO. 8 OF 8 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1016	02-00110-12-WR	LAKE	206	206
		CONTRACT NO. 63209		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		