

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAI 55: INTERSTATE 55

NORTHBOUND BOLINGBROOK WEIGH STATION

SECTION: 2009-017 I

WEIGH STATION IMPROVEMENT

WILL COUNTY

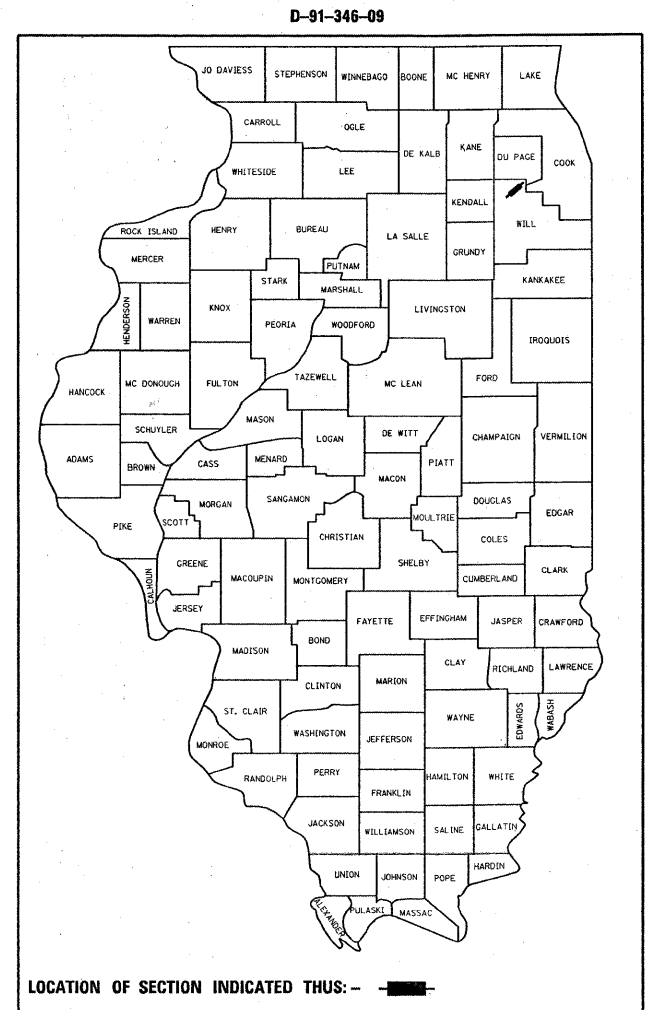
C-91-346-09

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2009-017 I	WILL	16	1
ILLINOIS			CONTRACT NO. 60G16	

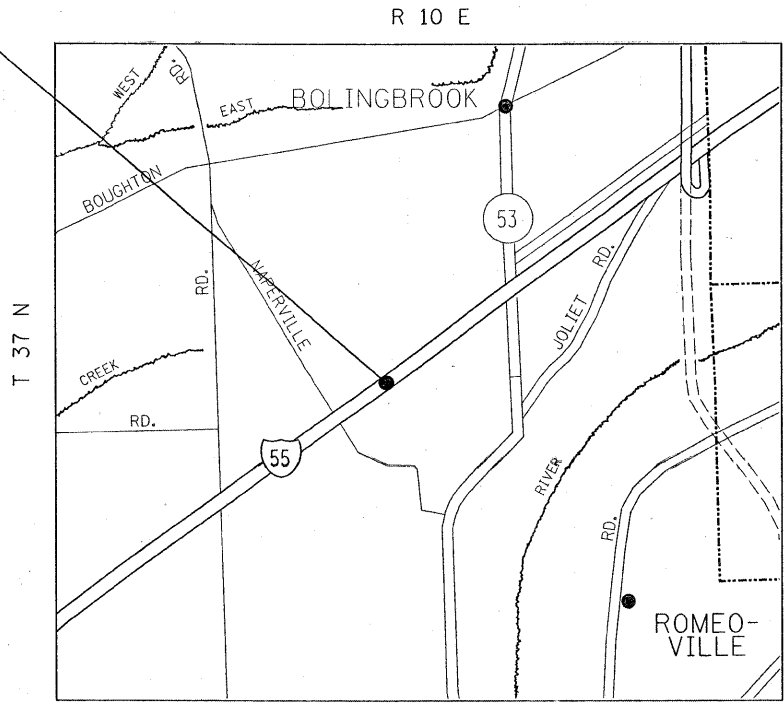
* 16+1=17

FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENT LOCATED IN THE VILLAGE OF BOLINGBROOK.



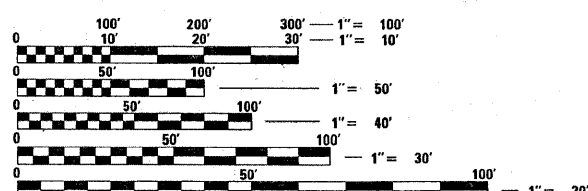
IMPROVEMENT LOCATION



TRAFFIC DATA

2007 ADT = 104,500

SPEED LIMIT = 55 MPH



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

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

PROJECT ENGINEER: DAN WILGREEN (847) 705-4240
 PROJECT MANAGER: KEN ENG

CONTRACT NO. 60G16

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED MARCH 24, 2009

Devin M. O'Keefe
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 8, 2009
Charles J. Ingersoll
 ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2009
Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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INDEX OF SHEETS

STATE STANDARDS

GENERAL NOTES

<u>SHEET NO.</u>	<u>DESCRIPTION</u>	<u>STANDARD NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET	000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
2	INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES	001001-02	AREAS OF REINFORCEMENT BARS
3	SUMMARY OF QUANTITIES	001006	DECIMAL OF AN INCH AND OF A FOOT
4-10	EXISTING AND PROPOSED IMPROVEMENT PLANS	420001-07	PAVEMENT JOINTS
10A	DRIVEWAY DETAILS, DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 M)	420401-07	BRIDGE APPROACH PAVEMENT CONNECTOR
11	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT	420701-02	PAVEMENT FABRIC
12	FREEWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS	442101-07	CLASS B PATCHES
13-16	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN	606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
		701901-01	TRAFFIC CONTROL DEVICES
		886001-01	DETECTOR LOOP INSTALLATION
		886006-01	TYPICAL LAYOUT FOR DETECTION LOOPS

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED)

THE CONTRACTOR WILL NOT BE ABLE TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT THE WRITTEN PERMISSION OF THE DEPARTMENT.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF BOLINGBROOK.

WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISABILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.

ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

THE RESIDENT ENGINEER SHALL CONTACT THE EXPRESSWAYS TRAFFIC CONTROL SUPERVISOR AT (847) 705-4151 A MINIMUM OF 72 HOURS PRIOR TO THE INSTALLATION OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

	MIXTURE TYPE	AC TYPE	AIR VOIDS (%)
DRIVEWAY	HOT-MIX ASPHALT BASE COURSE, (BINDER IL-19.0 MM), 8"	PG 64-22*	4% @ 50 GYR
	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, (IL-9.5MM), 2"	PG 64-22	4% @ 50 GYR
SHOULDER	HOT-MIX ASPHALT SHOULDER, 8"	PG 64-22*	2% @ 30 GYR
MEDIAN SURFACE	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, (IL-9.5MM), 2"	PG 64-22	4% @ 50 GYR

UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN

*WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

FILE NAME =	USER NAME = kellers	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTERSTATE 55 (NB BOLINGBROOK WEIGH STATION) INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\FWIDOT\KELLERS\0131400\0131400-09-Design.dgn	DRAWN -	REVISED -	55			2009-017 I	WILL	16	2	
PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -	CONTRACT NO. 60G16							
PLOT DATE = 4/27/2009	DATE -	REVISED -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
				SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.			

Existing Structure: N.B. Weigh Station at Bolingbrook was originally built in 1984 as F.A.I. Route 55, Section 99-ITWS-2-I-1 (82).
Project IR-55-6(152) 267 Will County. The existing concrete deck and approach slabs are to be removed and replaced at the N.B. station. Traffic will be detoured.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All construction joints shall be bonded. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The cost of any structure excavation shall be included with Approach Slab Removal, Pavement Removal or Class B Patches.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning-SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1-OZ/E/U. The color of the final finish coat shall be Gray, Munsell No 5B 7/1.

The SSPC-QP1 and SSPC-QP2 Painting Contractor Certifications will not be required for this Structure.

Field welding of construction accessories will not be permitted to beams. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

The Contractor shall fine the concrete surface of the platforms according to Article 420.09(e)(1) of the Standard Specifications. Cost included in Concrete Superstructure.

Cost of removal and disposal of subbase or subgrade material from the patches shall be included in the cost of Stabilized Sub-base 4" or Aggregate Subgrade 12".

All existing pavement markings that are removed shall be re-established after completion of pavement installation. Estimated quantity for Polyurea Pavement Marking Type I - Line 6" and 24" provided. The Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement bars designated (E) shall be epoxy coated.

Locations of sidewalk removal, median removal and driveway pavement removal shall be determined in the field by the Engineer.

The sidewalk shall be removed and replaced for the full 4 foot width behind the curb and gutter to be removed and replaced.

The existing material under the median surface shall be reused unless otherwise directed by the Engineer. The cost of reusing or replacing this material replacing this material with suitable backfill is included in the cost of the curb and gutter replacement.

INDEX OF SHEETS

1. General Data
2. General Plan and Elevation
3. Concrete Removal Plan and Details
4. Concrete Deck Plan and Details
5. Concrete Pit Repair Details
6. Approach and Ramp Pavement Removal Plan and Details
7. Approach Pavement Plan and Details

SCOPE OF WORK

1. Remove and replace concrete decks of the 4 platform scales.
2. Jack existing structural steel and replace load cells.
3. Remove and replace approach pavements, ramp pavements and curb and gutter up to first pavement joint.
4. Clean and paint structural steel.
5. Repair deteriorated areas of concrete on pit walls.

ITEM	UNIT	SUPER	SUB	TOTAL
Seeding, Class 2A	Acre	0.1		0.1
Nitrogen Fertilizer Nutrient	Pound	9		9
Phosphorus Fertilizer Nutrient	Pound	9		9
Potassium Fertilizer Nutrient	Pound	9		9
Mulch, Method 2	Acre	0.1		0.1
Sub-base Granular Material, Type A 4"	Sq. Yd.	55		55
Stabilized Sub-base 4"	Sq. Yd.	73		73
Protective Coat	Sq. Yd.	270		270
Bridge Approach Pavement Connector (PCC)	Sq. Yd.	16		16
Portland Cement Concrete Sidewalk 5"	Sq. Ft.	44		44
Pavement Removal	Sq. Yd.	16		16
Combination Curb and Gutter Removal	Foot	153		153
Sidewalk Removal	Sq. Ft.	44		44
Approach Slab Removal	Sq. Yd.	54		54
Median Removal	Sq. Ft.	135		135
Paved Shoulder Removal	Sq. Yd.	2		2
Class B Patches, Type III, 12"	Sq. Yd.	22		22
Class B Patches, Type IV, 12"	Sq. Yd.	29		29
Pavement Fabric	Sq. Yd.	51		51
Saw Cuts	Foot	24		24
Hot-Mix Asphalt Shoulder, 8"	Sq. Yd.	2		2
Removal of Existing Concrete Deck	L. Sum	1		1
Concrete Superstructure	Cu. Yd.	25		25
Cleaning and Painting Steel Bridge No. 1	L. Sum	1		1
Containment and Disposal of Lead Paint Cleaning Residues No 1.	L. Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	9,860		9,860
Combination Concrete Curb and Gutter, Type B-6.12	Foot	63		63
Combination Concrete Curb and Gutter, Type M-2.12	Foot	90		90
Stabilized Median Surface	Sq. Yd.	15		15
Mobilization	L. Sum	1		1
Polyurea Pavement Marking Type I - Line 6"	Foot	450		450
Polyurea Pavement Marking Type I - Line 24"	Foot	24		24
Electric Cable in Conduit, Lead-in, No. 14 1 Pair	Foot	90		90
Remove Electric Cable from Conduit	Foot	90		90
Drill Existing Handhole	Each	1		1
Induction Loop Detector Amplifier	Each	1		1
Detector Loop, Type I	Foot	34		34
Jack Remove and Replace Load Cells	L. Sum	1		1
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	52		52
Driveway Pavement Removal and Replacement	Sq. Yd.	6		6
Approach Pavement Special	Sq. Yd.	54		54
Aggregate Subgrade 12"	Sq. Yd.	97		97
Dowel Bars 1/2"	Each	20		20
Tie Bars 3/4"	Each	79		79

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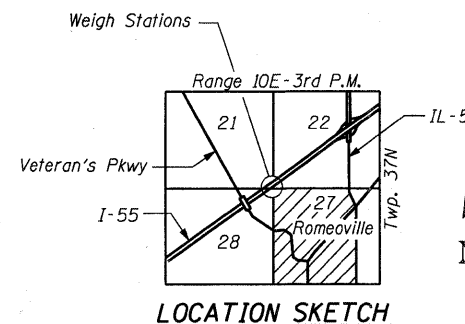
LOADING HS20-44
No future wearing surface allowed
DESIGN SPECIFICATIONS
17th Edition - 2002 AASHTO

DESIGN STRESSES

NEW CONSTRUCTION
 $f_c = 3,500$ psi (Deck)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (Structural Steel AASHTO M270 Grade 36)

FIELD UNITS (PIT)

$f_c = 1,000$ psi
 $f_s = 20,000$ psi (Reinforcement)
 $f_s = 20,000$ psi (Structural Steel)



GENERAL DATA
BOLINGBROOK WEIGH STATION (NB)
F.A.I. RT. 55 / I-55 - SEC. 2009-017 I
WILL COUNTY
STATION 401+22.79

LOCHNER

H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606

SHEET NO. 1 7 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	2009-017 I	WILL	16	4
CONTRACT NO. 60G16					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

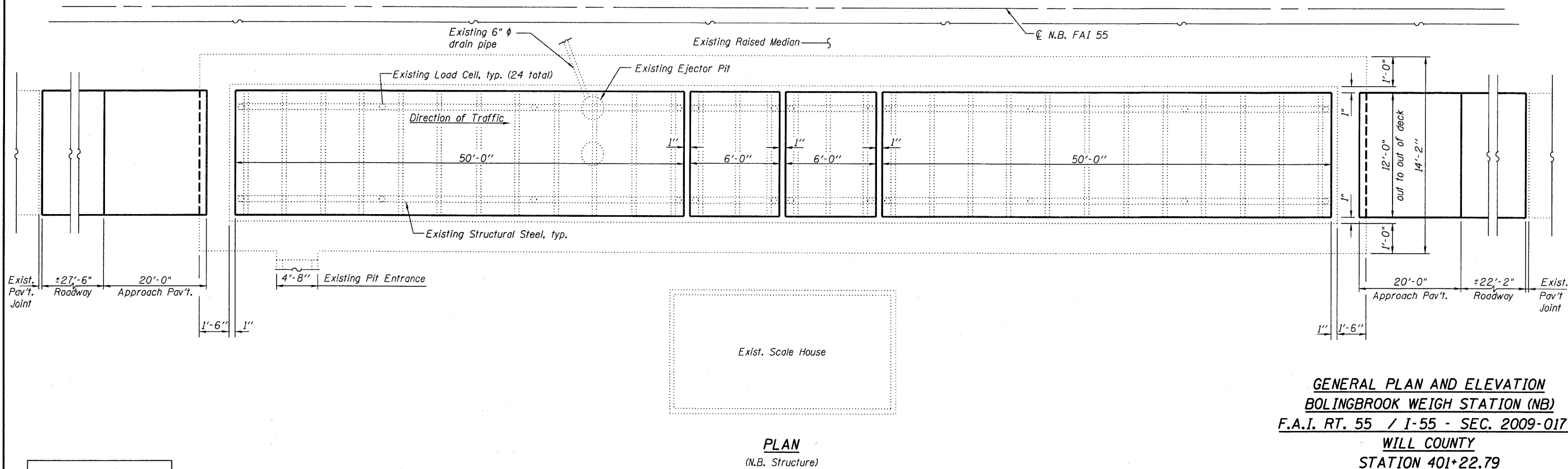
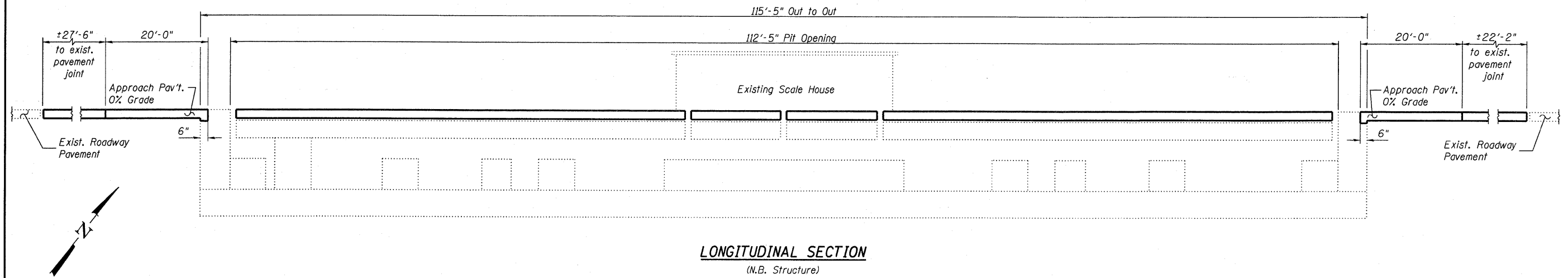
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



4/27/09

DESIGNED - JSD
CHECKED - RWC
DRAWN - GJS
CHECKED - RWC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



GENERAL PLAN AND ELEVATION
BOLINGBROOK WEIGH STATION (NB)
F.A.I. RT. 55 / I-55 - SEC. 2009-017 I
WILL COUNTY
STATION 401+22.79

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DRAWN - GJS
CHECKED - RWC


LOCHNER


H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606

SHEET NO. 2 7 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 60G16		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

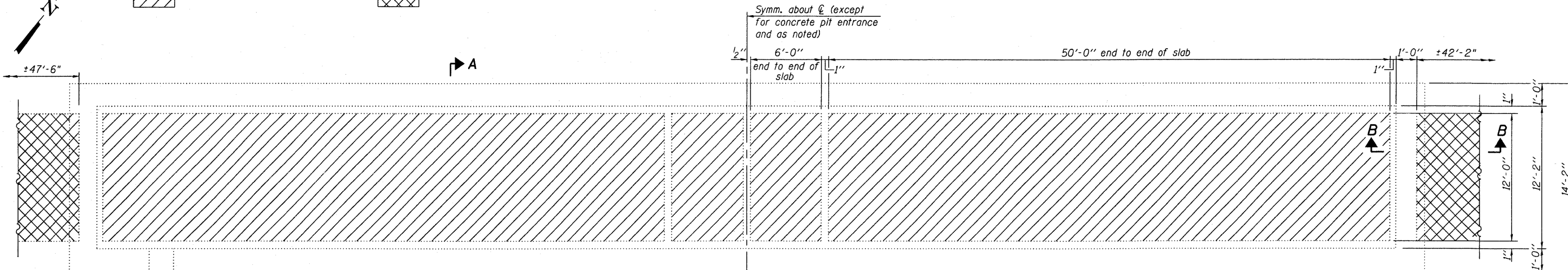
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

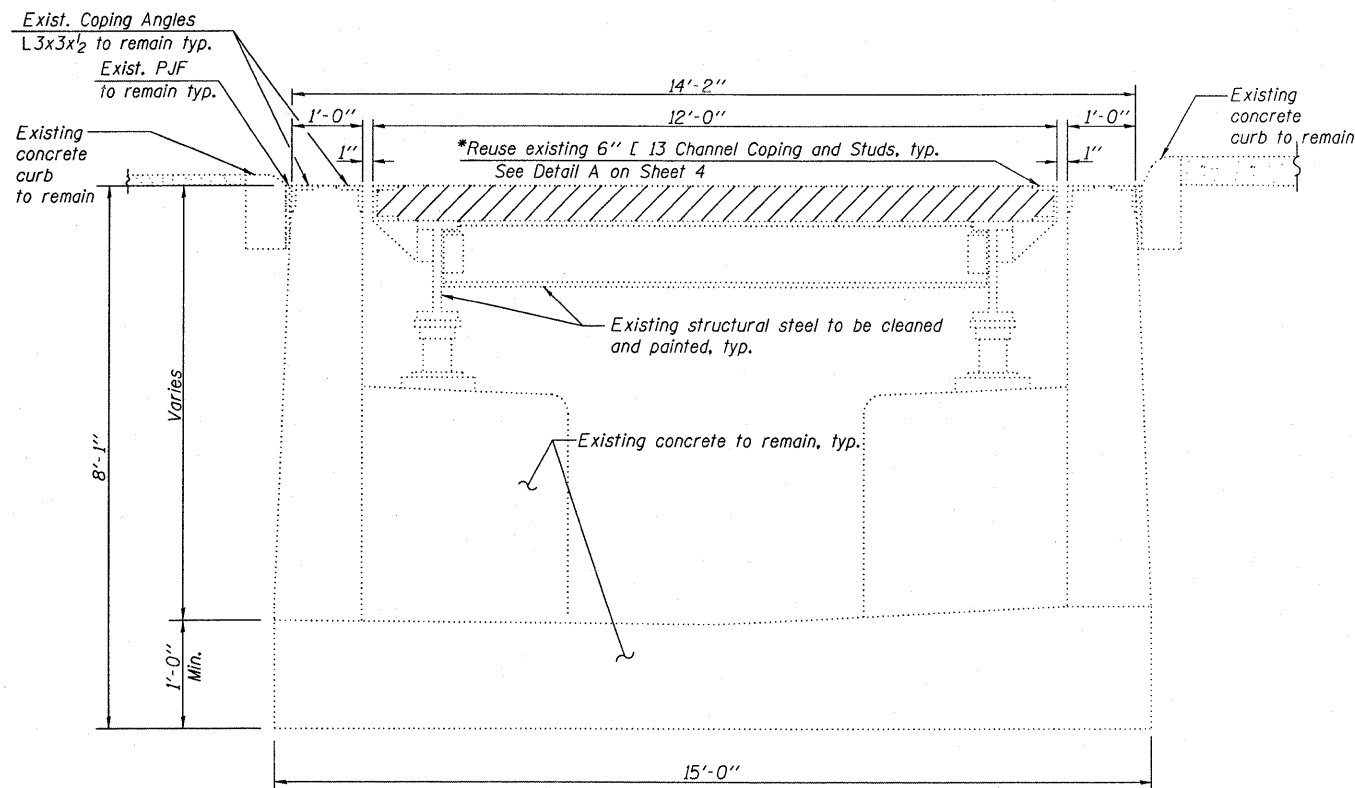
 Indicates concrete to be removed as Removal of Existing Concrete Deck.

 Indicates concrete to be removed as Approach Slab Removal and Pavement Removal (See Sheet 6 for details)

Symm. about \bar{C} (except for concrete pit entrance and as noted)

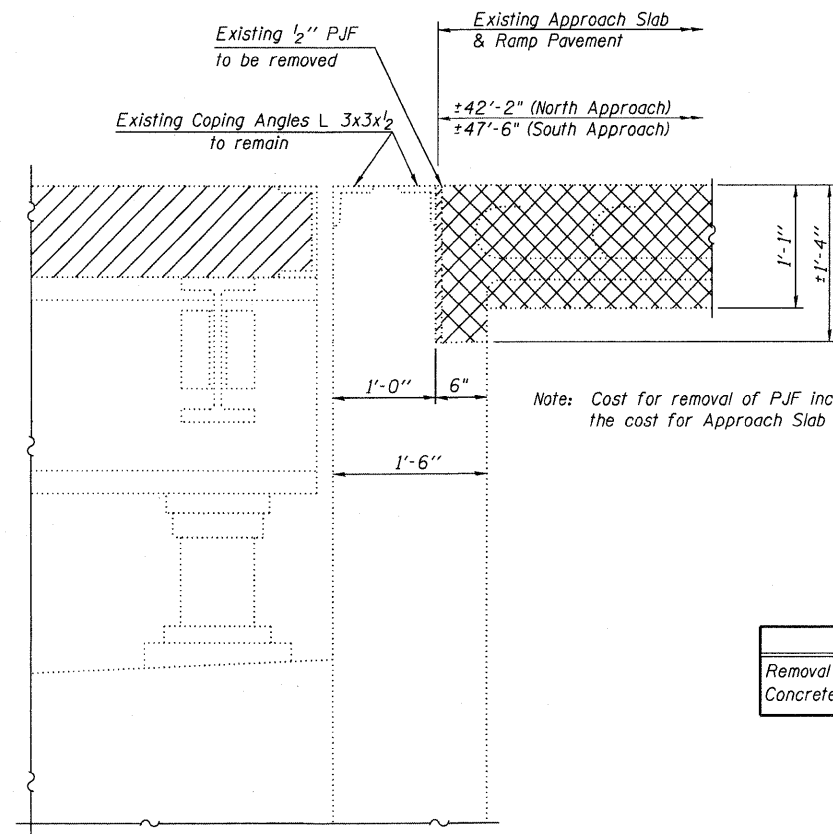


PLAN
(Coping not shown)



SECTION A-A

* See Note A on Sheet 4 of 7



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Removal of Existing Concrete Deck	L. Sum	1

NOTE:

See Sheet 6 of 7 for approach slab and ramp pavement removal details and Bill of Material.

**CONCRETE REMOVAL PLAN AND DETAILS
BOLINGBROOK WEIGH STATION (NB)**

DESIGNED - JSD
CHECKED - RWC
DRAWN - GJS
CHECKED - RWC

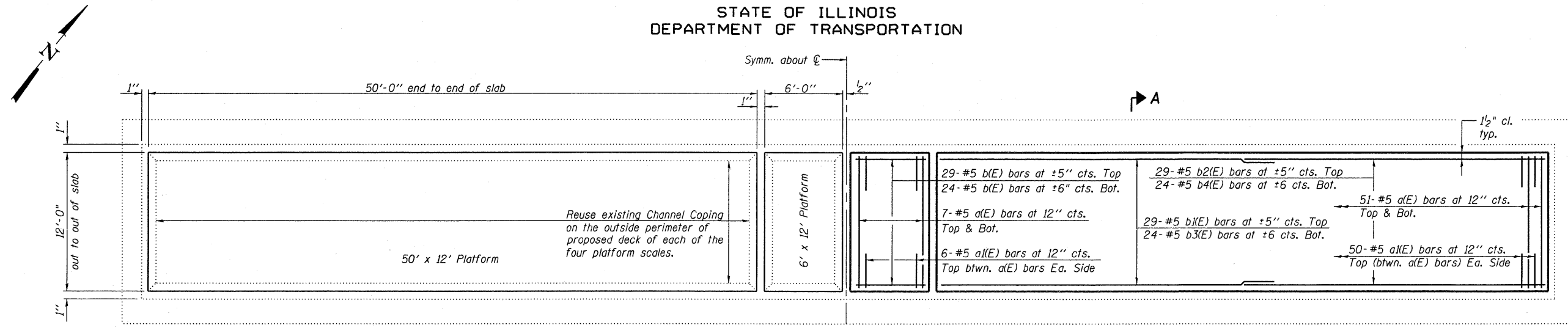
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CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606

SHEET NO. 3 7 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	2009-017 I	WILL	16	6
			CONTRACT NO. 60G16		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SHOWING CHANNEL COPING

PLAN
CONCRETE DECK
(Pit entrance not shown)

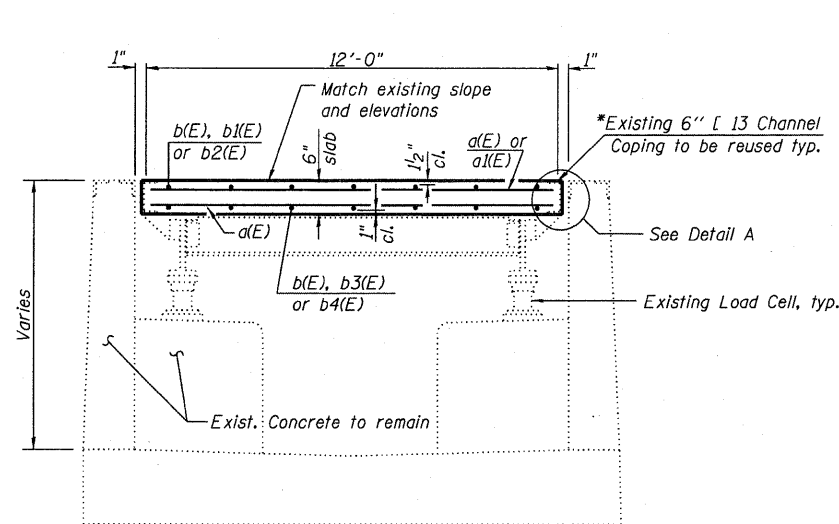
SHOWING REINFORCEMENT

MIN. BAR LAP

#5 Bar = 2'-2"

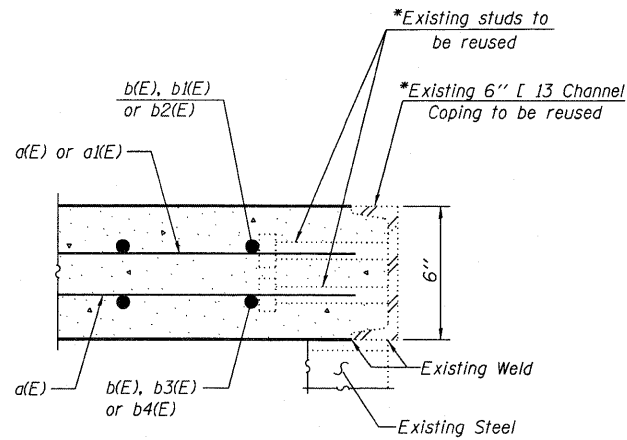
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	232	#5	11'-9"	—
a(E)	224	#5	2'-9"	—
b(E)	106	#5	5'-9"	—
b(E)	58	#5	29'-1"	—
b2(E)	58	#5	22'-10"	—
b3(E)	48	#5	27'-1"	—
b4(E)	48	#5	24'-10"	—
Protective Coat		Sq. Yd.	150	
Conc. Superstructure		Cu. Yd.	25	
Reinforcement Bars, Epoxy Coated		Pound	9860	



SECTION A-A

*See Note A



DETAIL A

*See Note A

Note A:

*The Contractor has the option to remove the existing channel coping (with existing studs) which is welded to the existing steel and replace it with new channel coping (with new studs). If the Contractor chooses to do this, the Bureau of Bridges and Structures shall be contacted for weld information, the Contractor shall take care not to damage the existing steel which is to be reused, and there shall be no extra cost to the Department.
The cost of removing, cleaning, painting and reinstalling the existing coping channels shall be included with the cost of Removal of Existing Concrete Deck.

NOTE:

See Sheets 6 and 7 of 7 for approach and ramp pavement details.

CONCRETE DECK PLAN AND DETAILS
BOLINGBROOK WEIGH STATION (NB)

DESIGNED - JSD
CHECKED - RWC
DRAWN - GJS
CHECKED - RWC

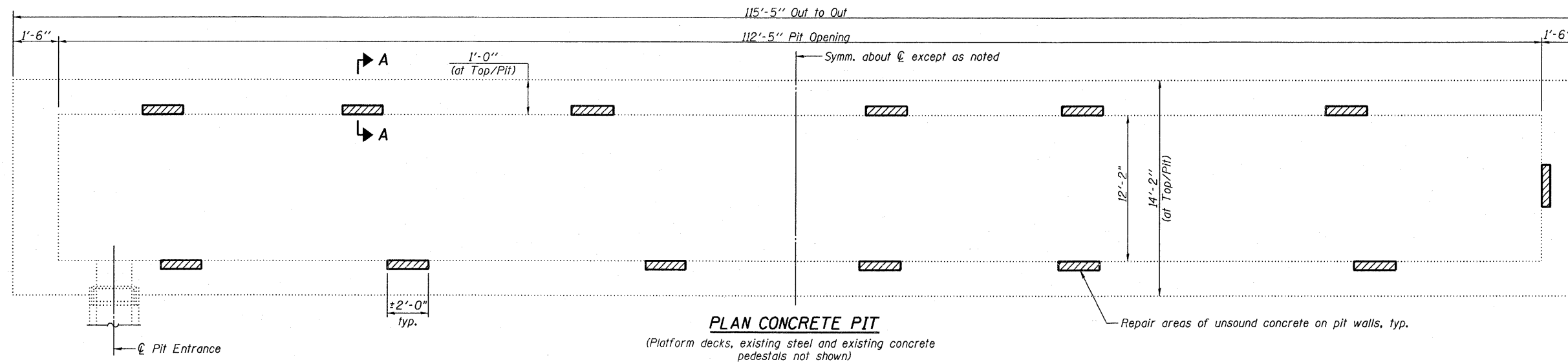
LOCHNER

H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606

SHEET NO. 4	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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7 SHEETS	CONTRACT NO. 60G16				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

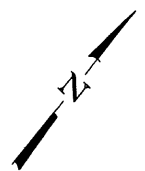
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



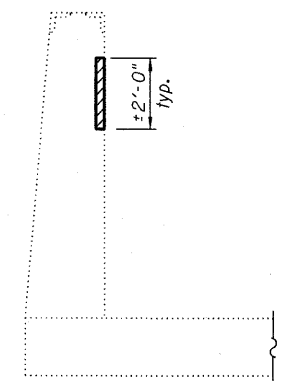
PLAN CONCRETE PIT

(Platform decks, existing steel and existing concrete pedestals not shown)




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DESIGNED - JSD
CHECKED - RWC
DRAWN - GJS
CHECKED - RWC



SECTION A-A

 Structural Repair of Concrete
(Depth equal to or less than 5')

NOTE
The Engineer shall determine the extent and location of repairs in the field. An estimated quantity has been provided. Such variations shall not be cause for additional compensation for a change in the scope of work; however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

BILL OF MATERIAL

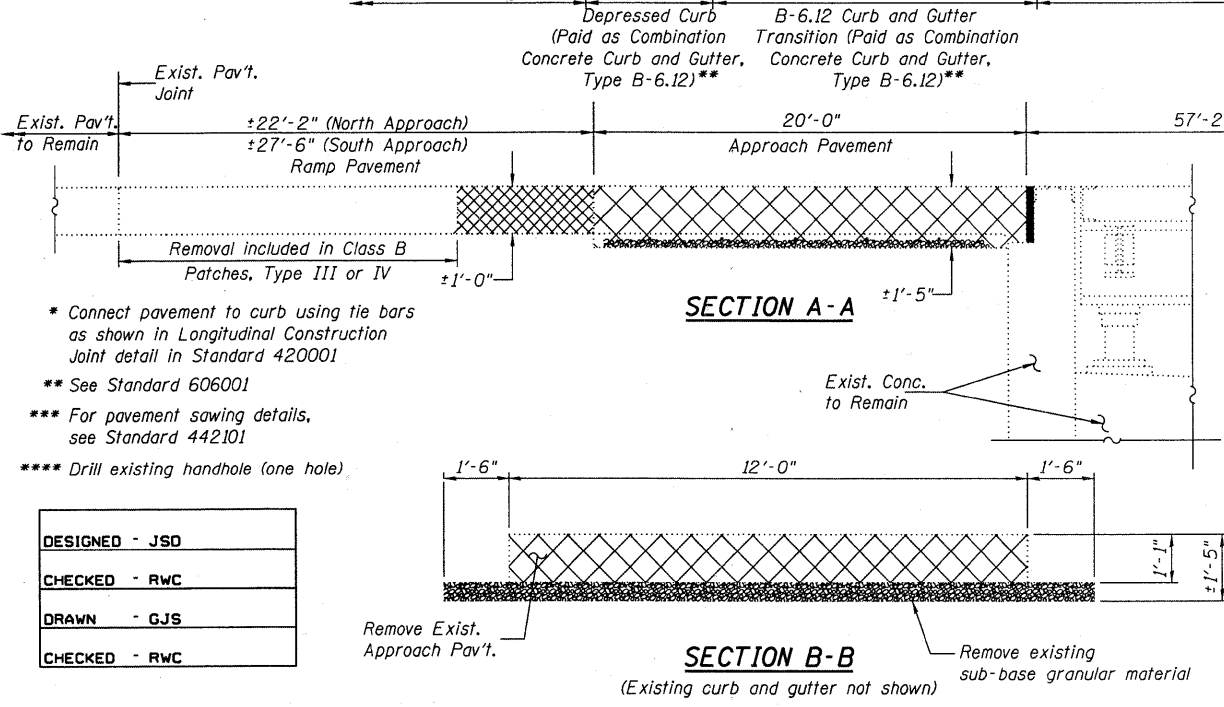
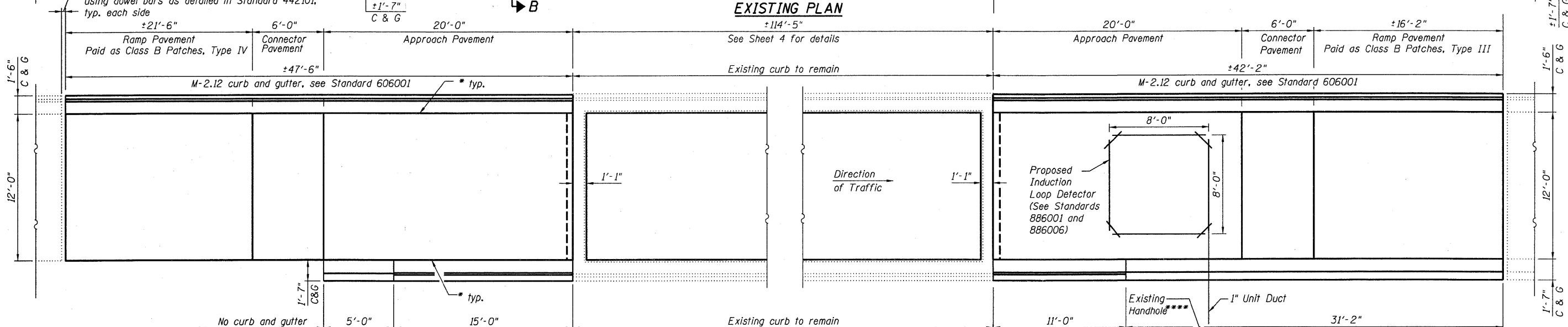
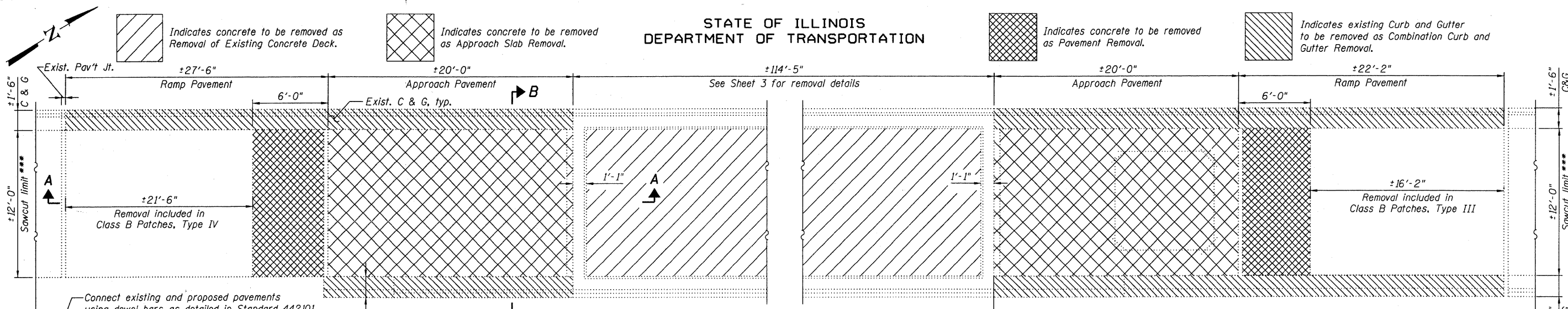
Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5')	Sq. Ft.	52

**CONCRETE PIT REPAIR DETAILS
BOLINGBROOK WEIGH STATION (NB)**

LOCHNER
H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606

SHEET NO. 5 7 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	2009-017 I	WILL	16	8
CONTRACT NO. 60G16					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PROPOSED PLAN

NOTES:

- See Sheet 7 of 7 for Proposed Approach Pavement Details and Bill of Material.
- Type III and Type IV Patches shall be reinforced with pavement fabric according to details shown in Standard 420701.
- The details shown assume that the Connector Pavement and Ramp Pavement will be poured in the same pour. If Contractor elects to use more than one pour, tie bars are required as shown in Standard 420001. This shall not be cause for additional compensation for a change in the scope of work.
- Seeding, Mulch and Fertilizer quantities assume a maximum 0.1 acre of area will require re-seeding.
- See Sheet 1 of 7 for Bill of Material and General Notes regarding removal and replacement of material behind curb and gutter to be removed and replaced.

BILL OF MATERIAL

Item	Unit	Total	Item	Unit	Total
Seeding, Class 2A	Acre	0.1	Combination Concrete Curb and Gutter, Type M-2.12	Foot	90
Nitrogen Fertilizer Nutrient	Pound	9	Electric Cable in Conduit, Lead-in, No. 14 1 Pair	Foot	90
Phosphorus Fertilizer Nutrient	Pound	9	Drill Existing Handhole	Each	1
Potassium Fertilizer Nutrient	Pound	9	Induction Loop Detector Amplifier	Each	1
Mulch, Method 2	Acre	0.1	Detector Loop, Type I	Foot	34
Stabilized Sub-base 4"	Sq. Yd.	73	Aggregate Subgrade 12"	Sq. Yd.	83
Protective Coat	Sq. Yd.	120	Dowel Bars 1/2"	Each	20
Pavement Removal	Sq. Yd.	16	Tie Bars 3/4"	Each	79
Combination Curb and Gutter Removal	Foot	153			
Approach Slab Removal	Sq. Yd.	54			
Class B Patches, Type III, 12"	Sq. Yd.	22			
Class B Patches, Type IV, 12"	Sq. Yd.	29			
Pavement Fabric	Sq. Yd.	51			
Saw Cuts	Foot	24			
Combination Concrete Curb and Gutter, Type B-6.12	Foot	63			

**APPROACH AND RAMP PAVEMENT REMOVAL
PLAN AND DETAILS
BOLINGBROOK WEIGH STATION (NB)**

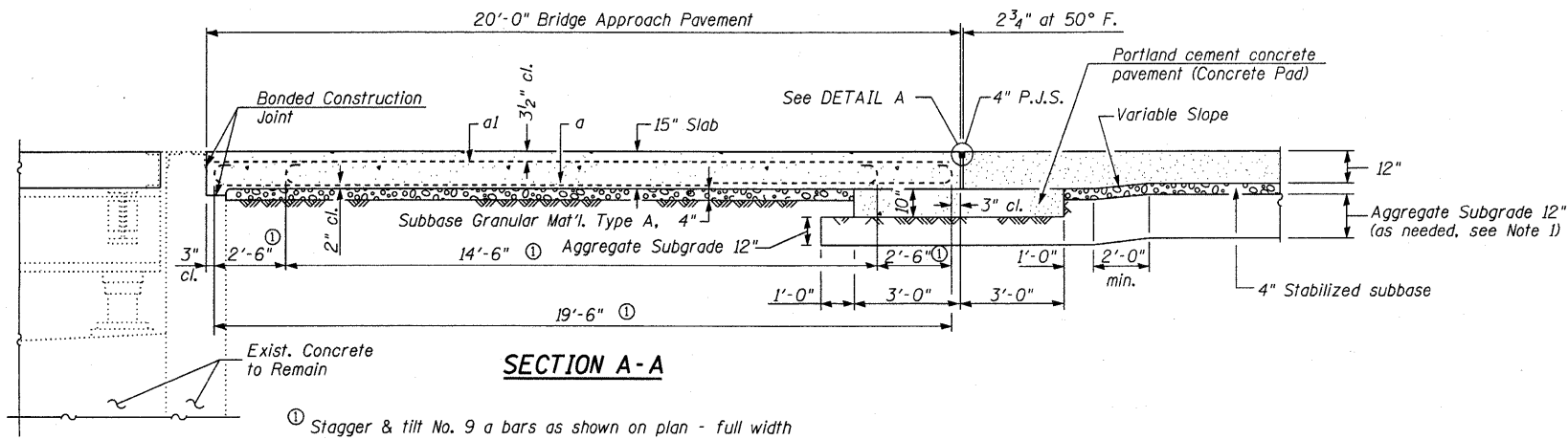
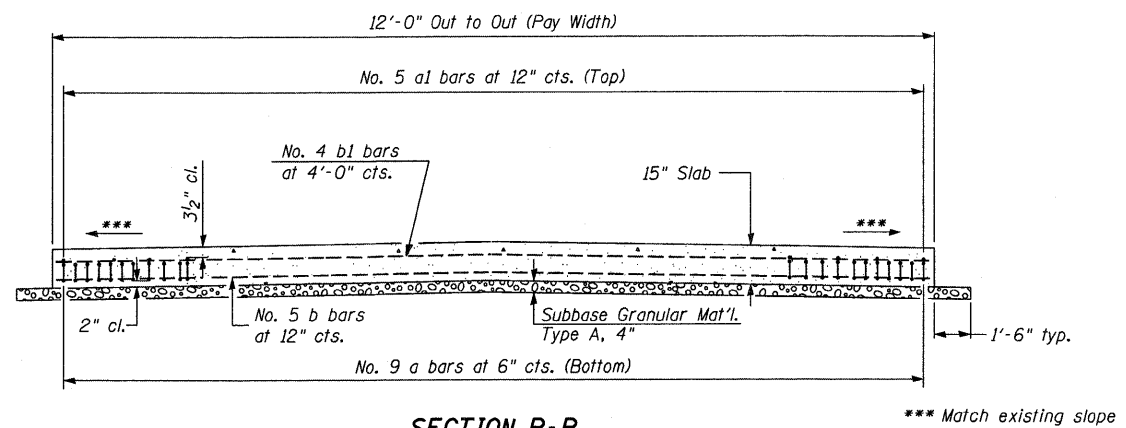
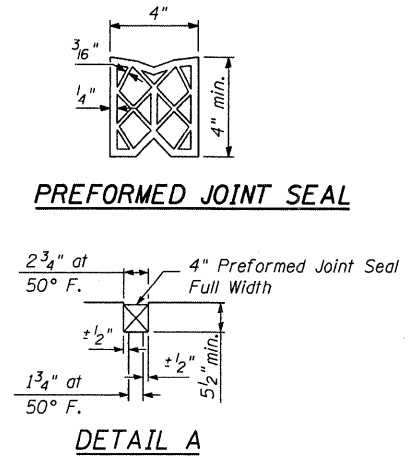
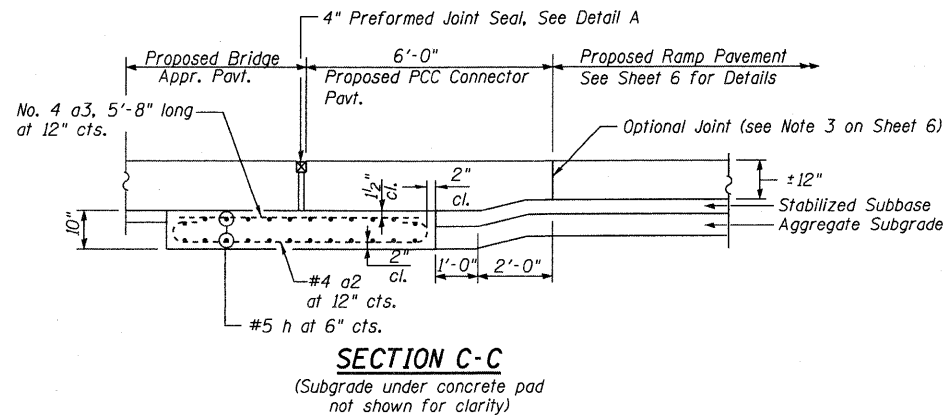
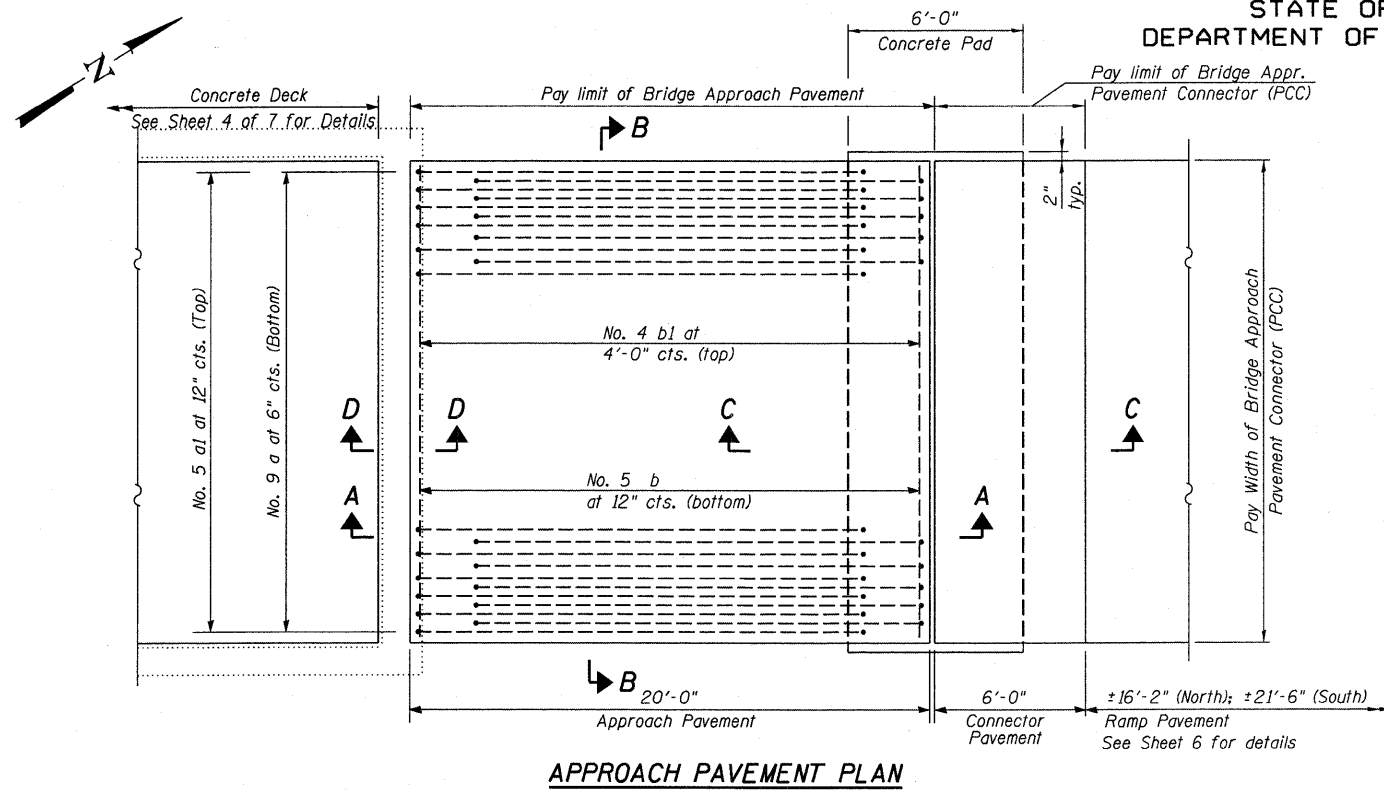
LOCHNER
H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606

SHEET NO. 6	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60G16			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

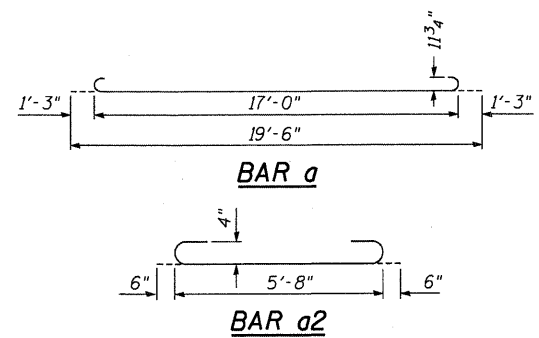
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DESIGNED - JSD
CHECKED - RWC
DRAWN - GJS
CHECKED - RWC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



① Stagger & tilt No. 9 a bars as shown on plan - full width

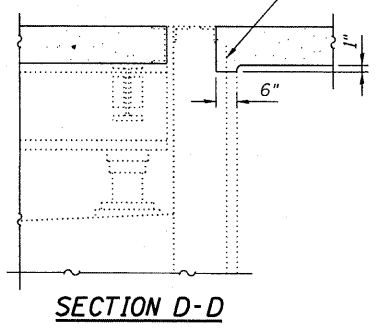


BILL OF MATERIAL

Item	Unit	Total
Sub-base Granular Material, Type A 4"	Sq. Yd.	55
Bridge Approach Pavement Connector (PCC)	Sq. Yd.	16
Approach Pavement Special	Sq. Yd.	54
Aggregate Subgrade 12"	Sq. Yd.	14

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Approach Slab Removal.

- NOTES**
- Subgrade shall be Aggregate Subgrade 12" unless specified otherwise by the Engineer in the field.
 - Approach pavement reinforcement included with the cost of Approach Pavement Special.
 - See Sheet 6 of 7 for removal details and quantities.



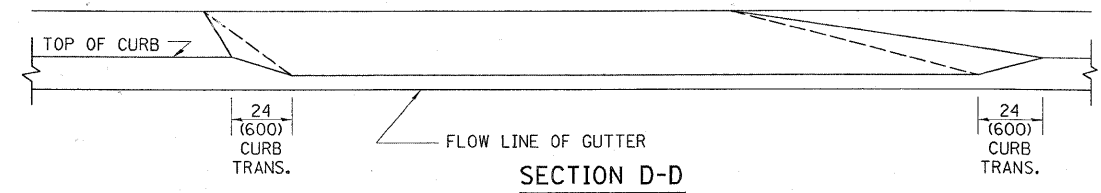
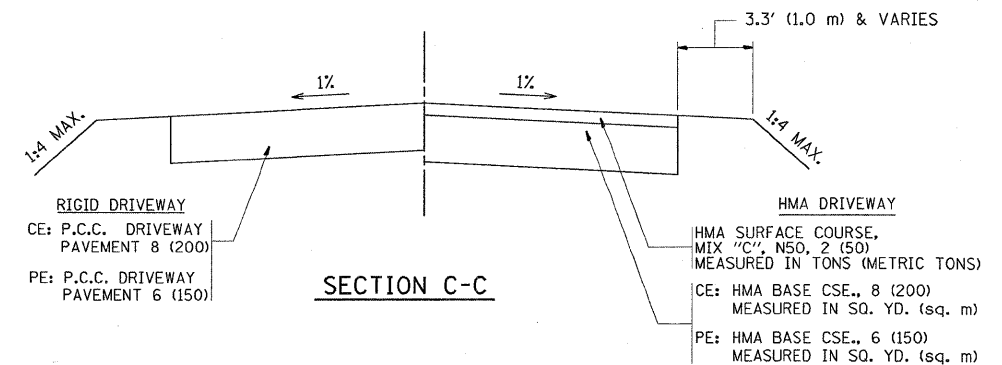
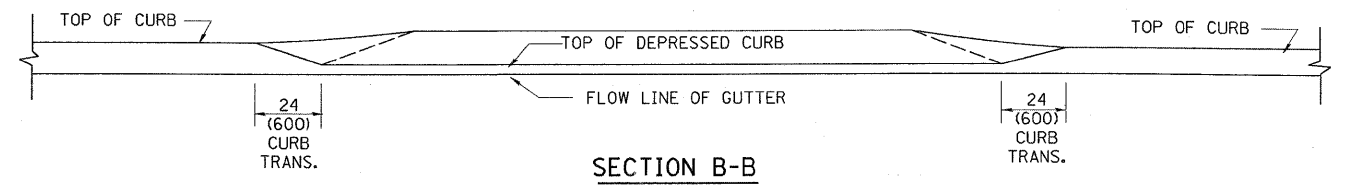
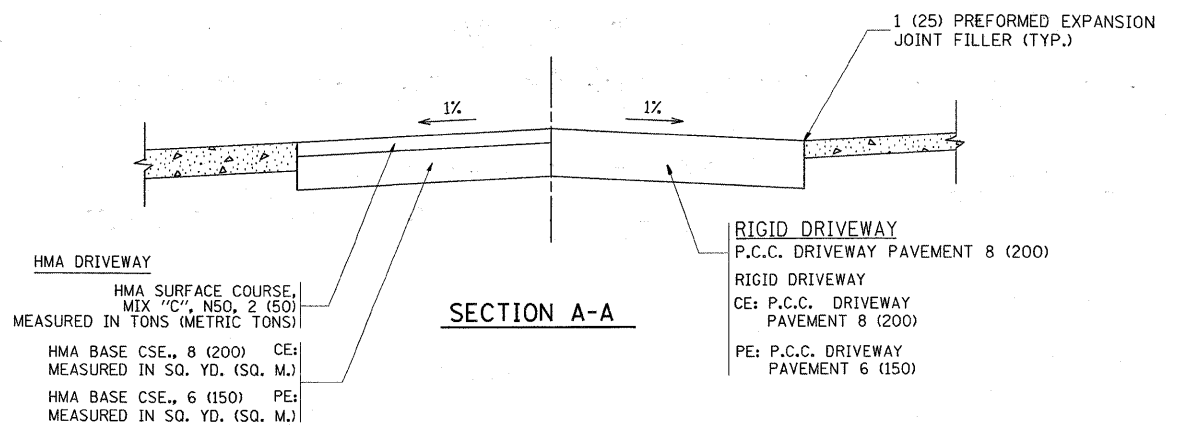
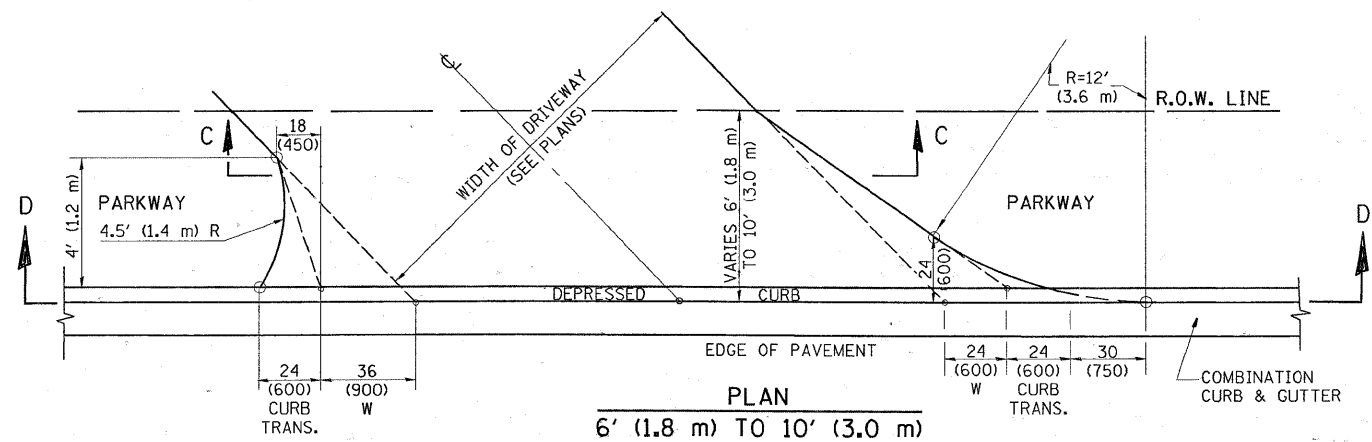
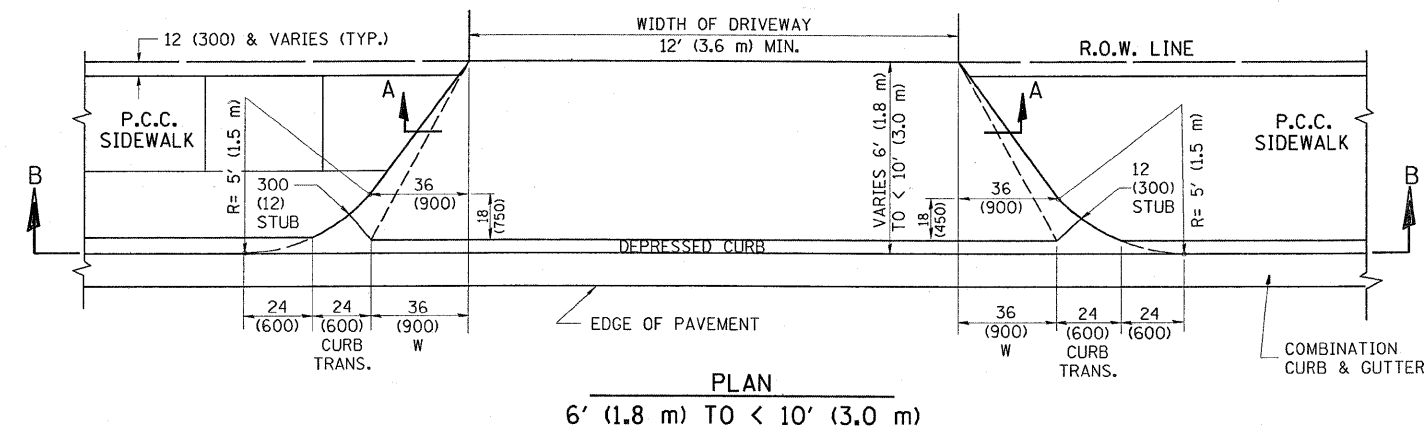
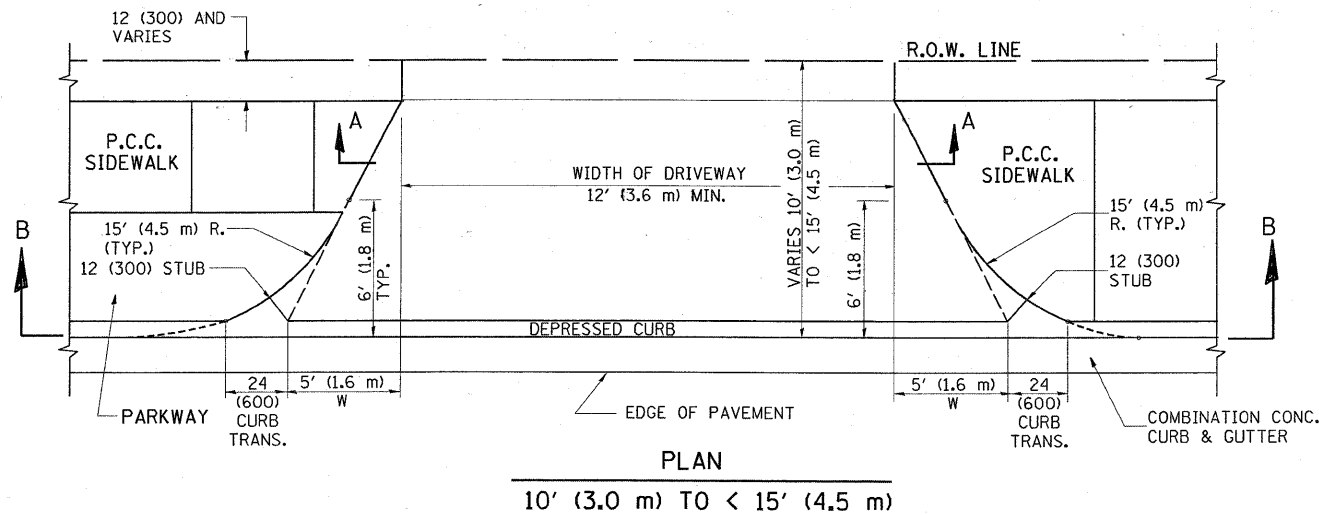
DESIGNED - JSD
CHECKED - RWC
DRAWN - GJS
CHECKED - RWC

**APPROACH PAVEMENT PLAN AND DETAILS
BOLINGBROOK WEIGH STATION (NB)**

LOCHNER
H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606

SHEET NO. 7 7 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	2009-017 I	WILL	16	10
CONTRACT NO. 60G16					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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GENERAL NOTES

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

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

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

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

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

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

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

FILE NAME =	USER NAME = kellers	DESIGNED - R. SHAH	REVISED - T. HOLTZ 04-08-97
cd:\pw_work\PWIDOT\KELLERS\0131400\01st.dgn		DRAWN -	REVISED - M. GOMEZ 04-06-01
PLOT SCALE = 50.0000" / IN.		CHECKED -	REVISED - P. LaFLEUR 04-15-03
PLOT DATE = 4/27/2009		DATE - 11-06-95	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

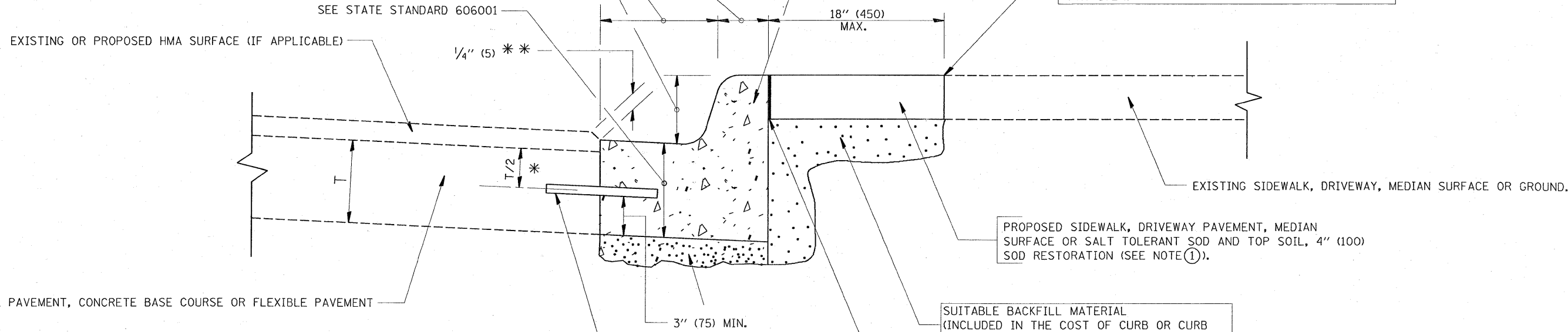
DRIVEWAY DETAILS	
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2009-017 I	WILL	16	10A
BD400-02 (BD-02)			CONTRACT NO. 60G16	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL PAY ITEM.



- * 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- ** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SALT TOLERANT SOD AND TOP SOIL, 4" (100) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

- ② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
- ③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
- ④ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑤ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑥ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.
- ⑦ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SALT TOLERANT SOD AND TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

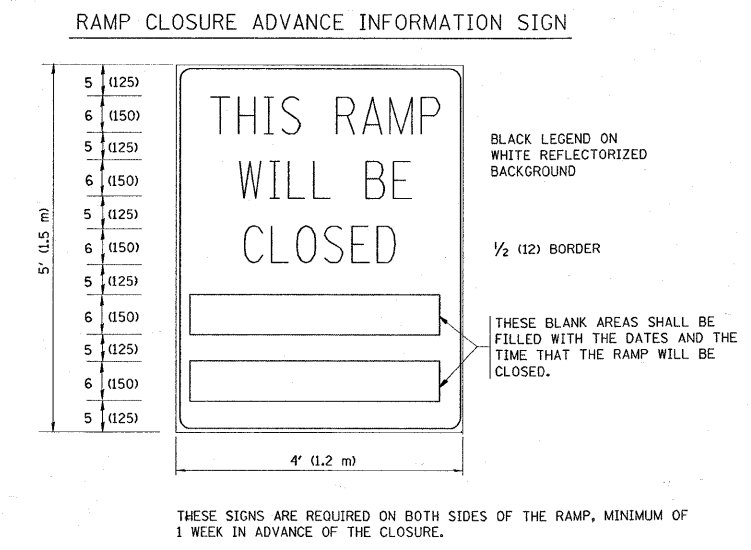
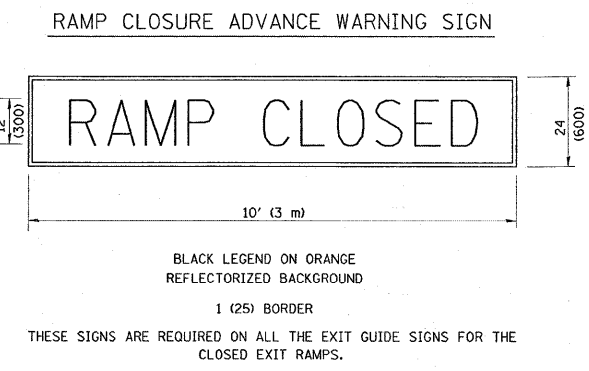
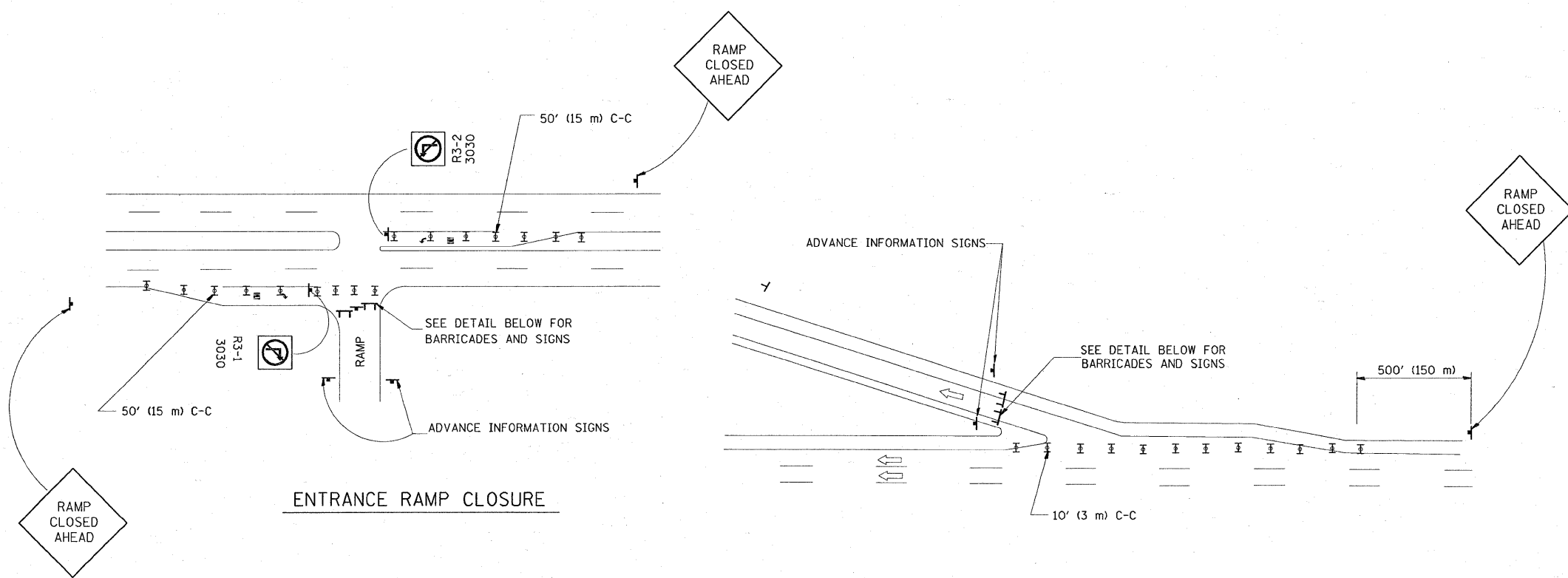
BASIS OF PAYMENT:

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

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

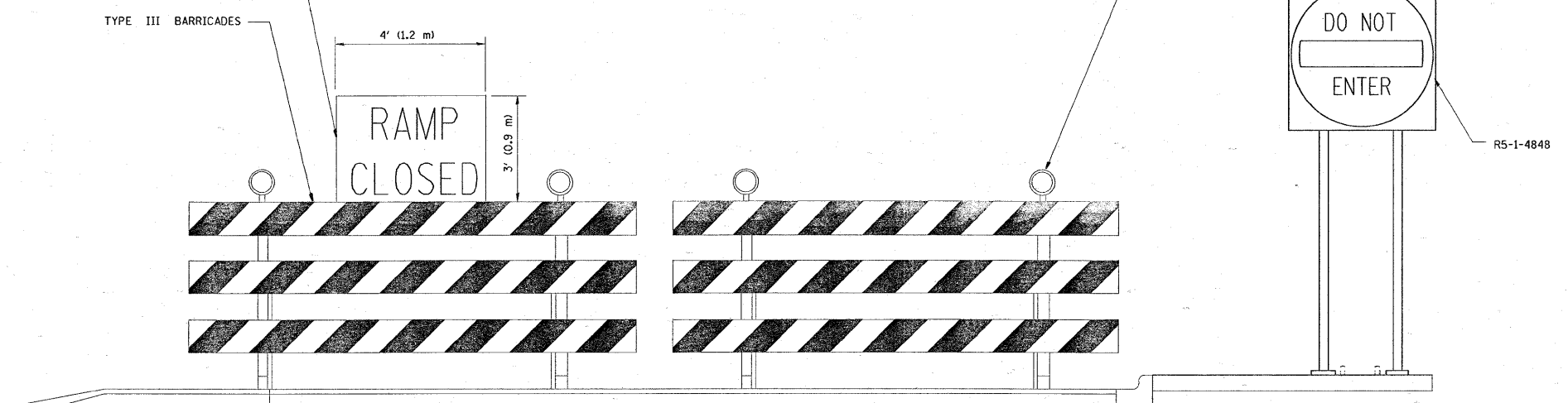
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - M. GOMEZ 01-22-01	BD600-06 (BD-24)			CONTRACT NO. 60G16				
PLOT DATE = 3/23/2009	DATE - 03-11-94	REVISED - R. BORO 01-01-07	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS		STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



THE "RAMP CLOSED" SIGN SHALL BE B/W WITH 8 (200) CAPS. IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS DIRECTLY IN FRONT OF THE BARRICADE.

FLASHER UNIT AMBER BOTH SIDES OF EACH TYPE III BARRICADE



DETAIL FOR REQUIRED BARRICADES & SIGNS

- SYMBOLS**
- ▬ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
 - ▬ TYPE III BARRICADE WITH FLASHING LIGHT

- GENERAL NOTES:**
1. CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
 2. STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
 3. A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
 4. ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
 5. THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
 6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
 7. THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY FOUR (24) HOURS IN LENGTH.

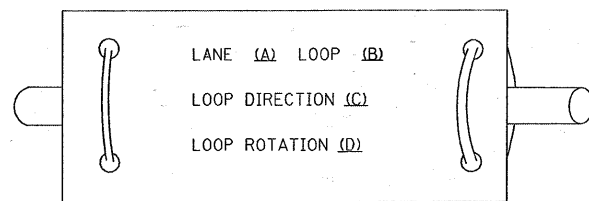
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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alpha_work\pwi001\kellers\0131400\Dist	td.dgn	DRAWN -	REVISED - DWS/JAF 12-02					55	2009-017 I	WILL	16	12
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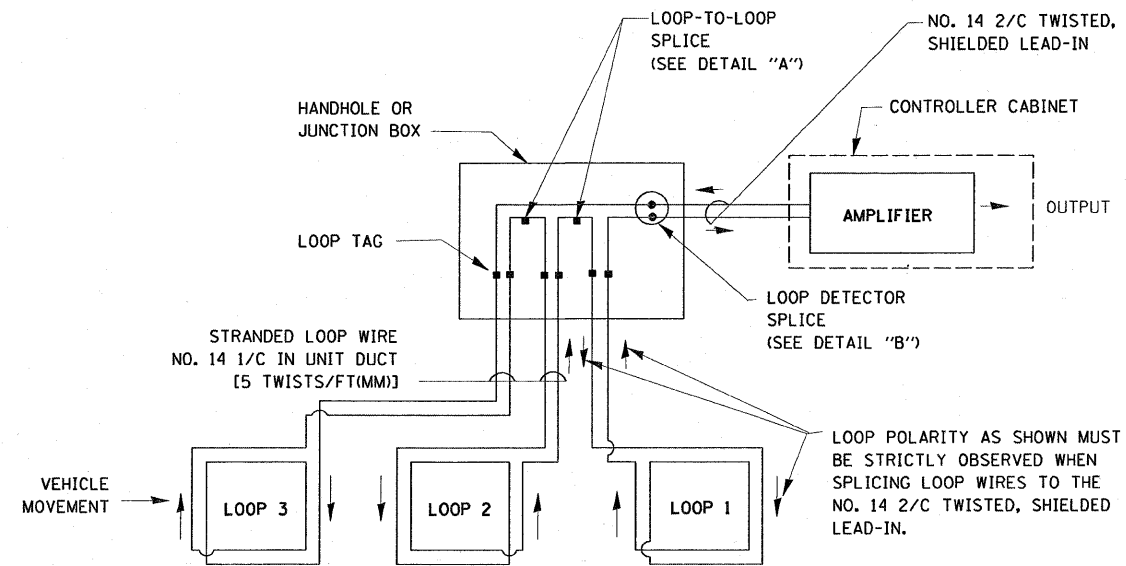
LOOP DETECTOR NOTES

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

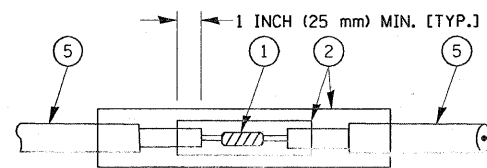


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

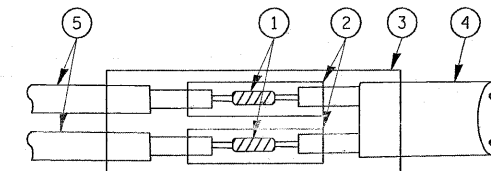


DETECTOR LOOP WIRING SCHEMATIC

- 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**

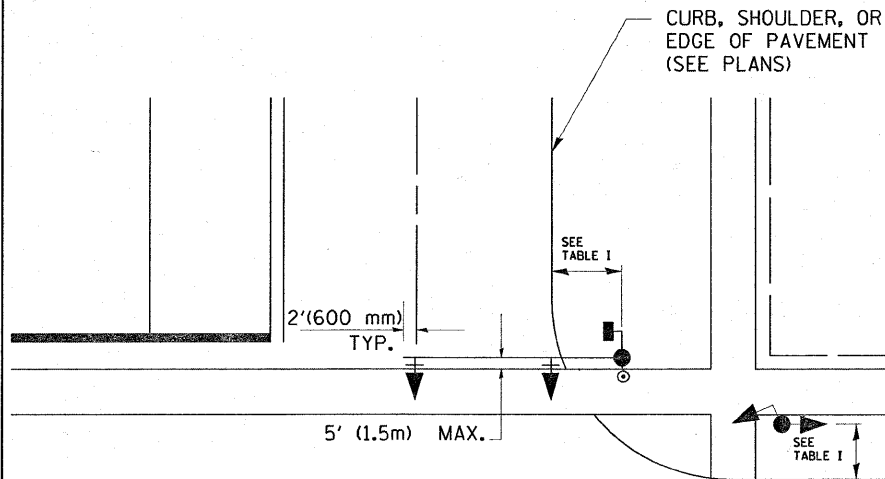
LOOP DETECTOR SPLICE

- 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 LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

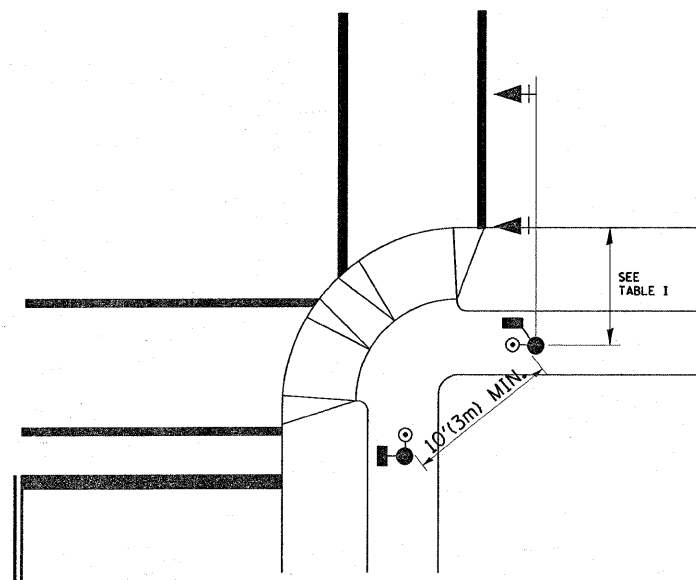
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PLOT DATE = 3/23/2009	DATE - 05-30-00	REVISED -	SCALE: NONE			SHEET NO. 1 OF 4 SHEETS		STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

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:

- 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
- 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.
- 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.
- 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

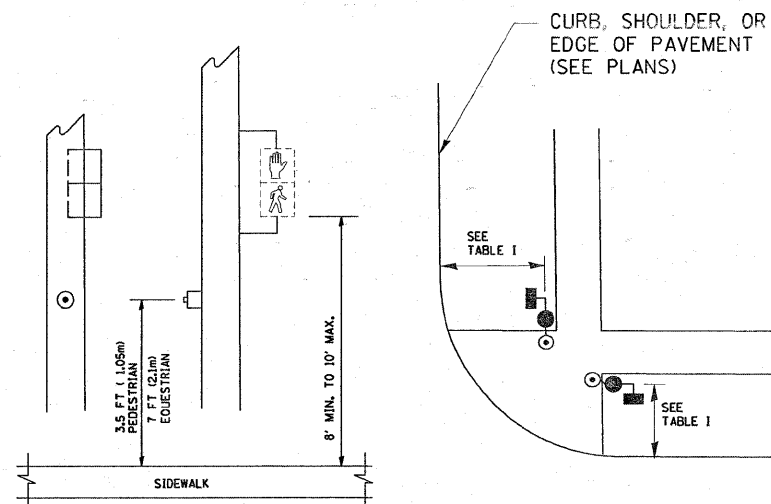


TABLE I

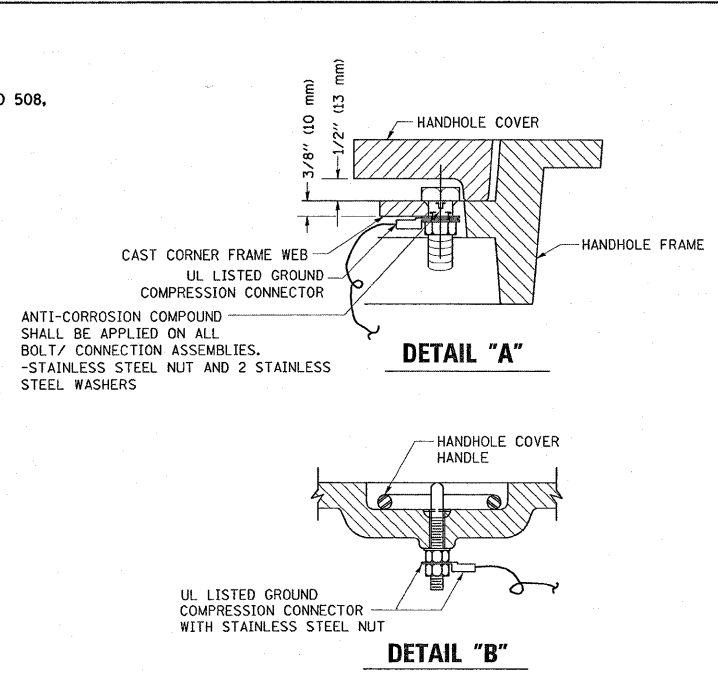
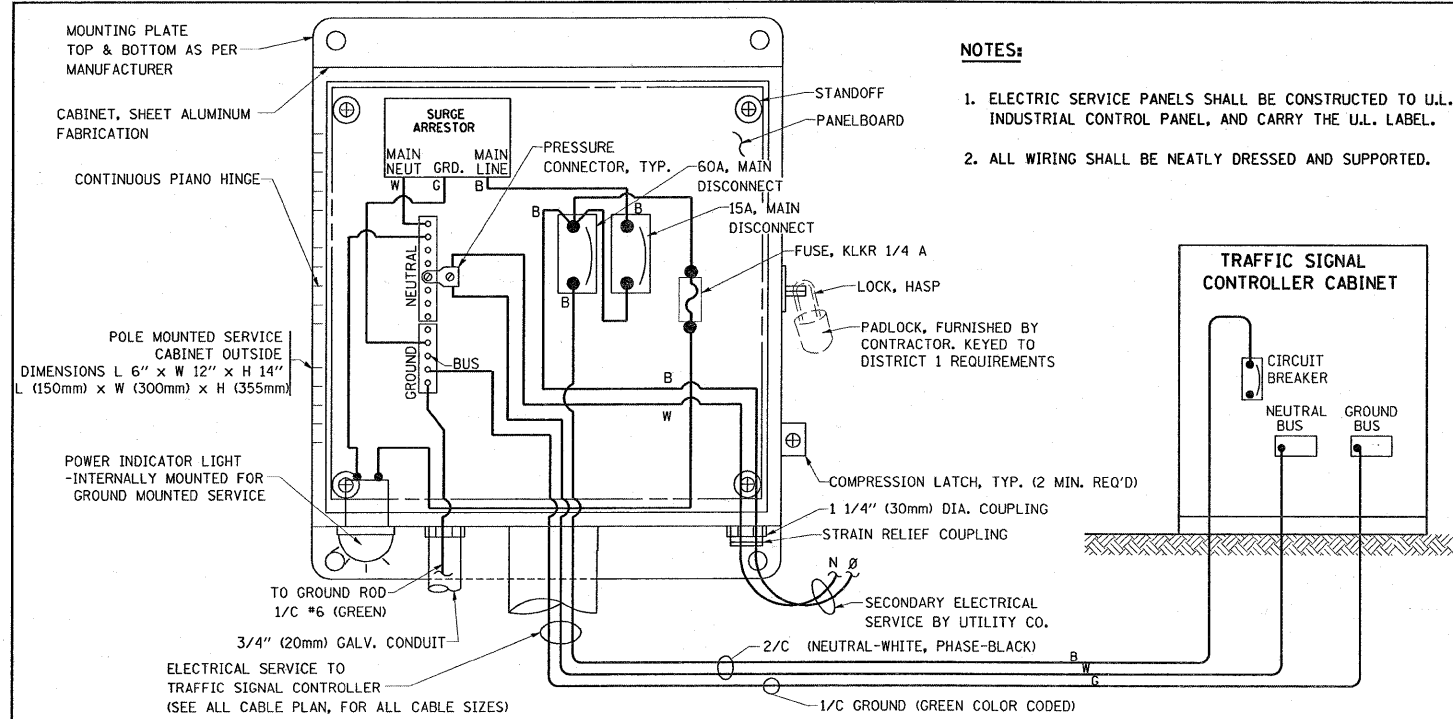
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m),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

FILE NAME =	USER NAME = kellers	DESIGNED - D.A.D.	REVISED - BUR. TRAFFIC 01-01-02
ca:\pwork\PWIDOT\KELLERS\0131400\Dist\std.dgn		DRAWN - R.W.P.	REVISED -
PLOT SCALE = 50.0000 / IN.		CHECKED - D.A.Z.	REVISED -
PLOT DATE = 3/23/2009		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 2 OF 4 SHEETS	STA.	TO STA.

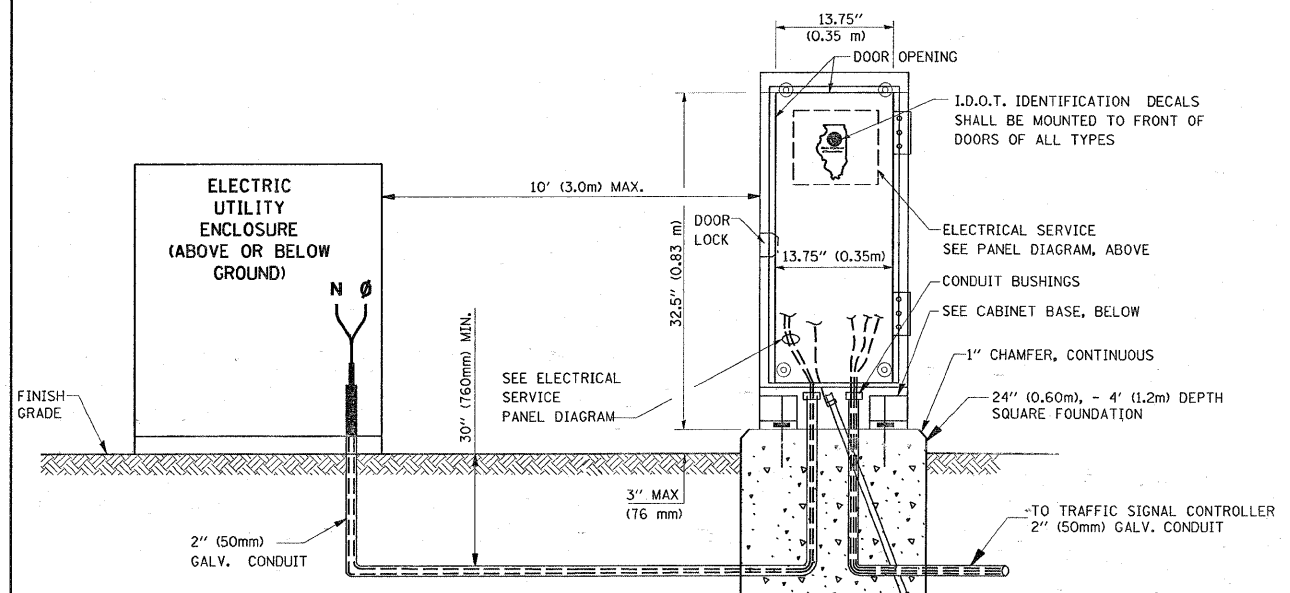
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2009-017 I	WILL	16	14
TS-05		CONTRACT NO. 60G16		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



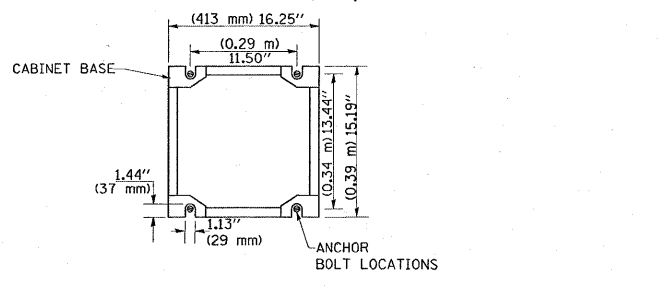
- NOTES:**
- GROUNDING SYSTEM**
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED 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.

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

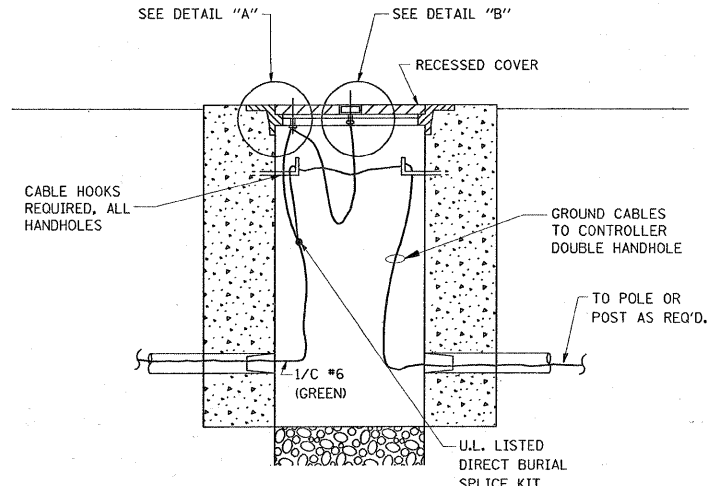
SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)



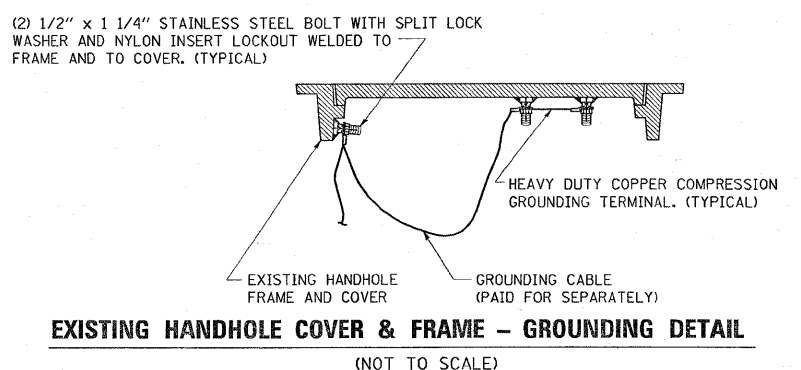
SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)



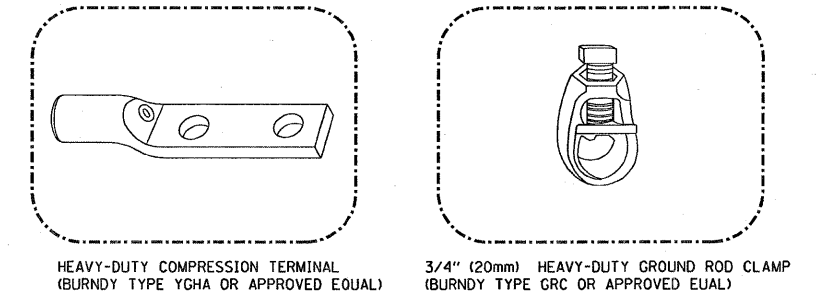
CABINET - BASE BOLT PATTERN (NOT TO SCALE)



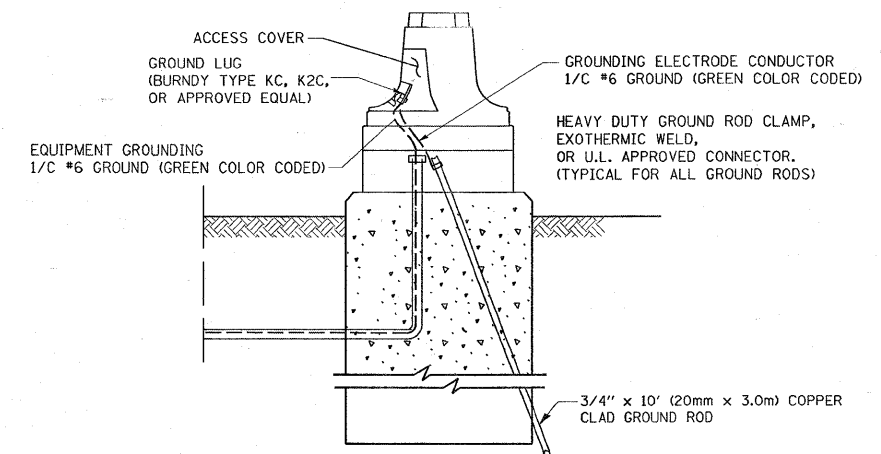
HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)



- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, U.L. 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)

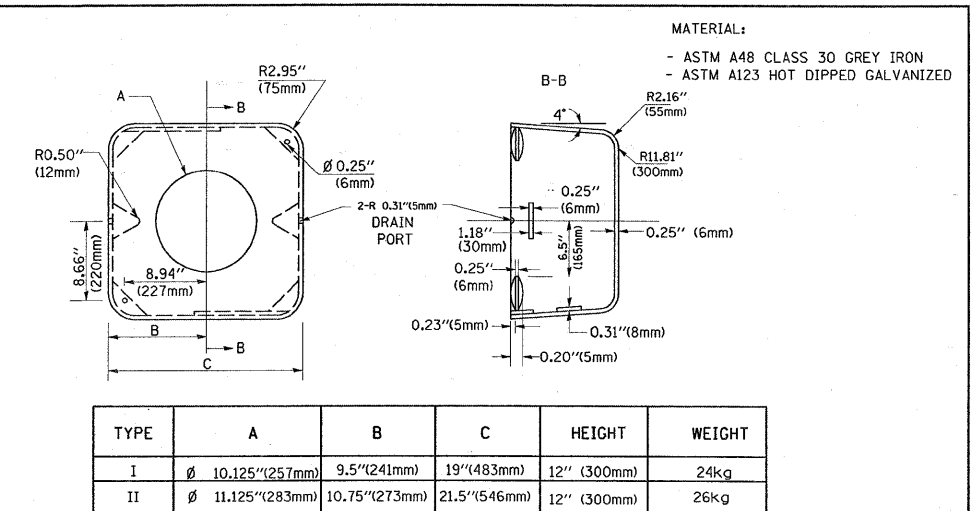
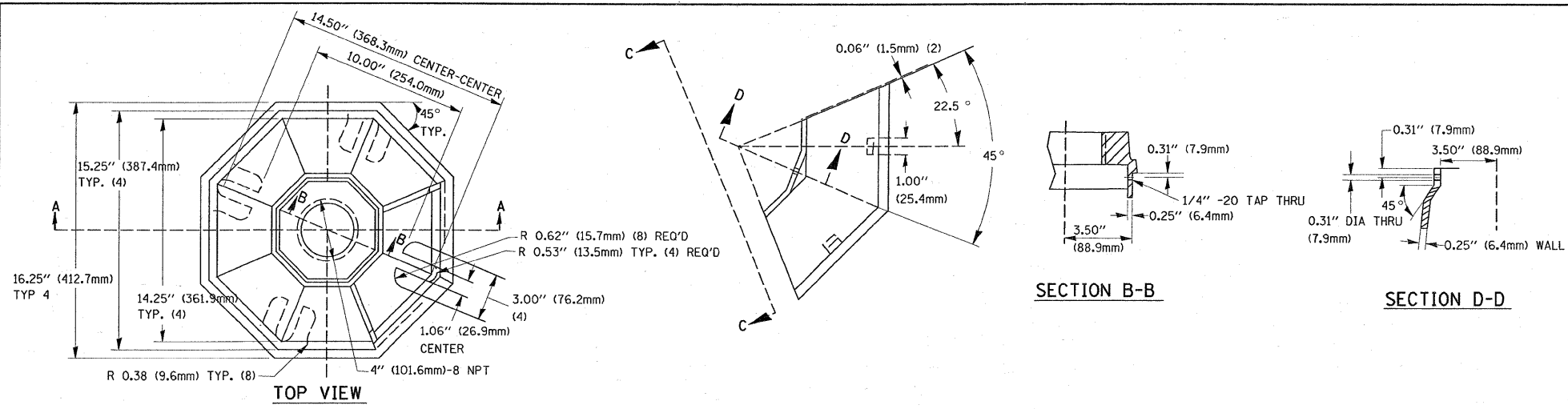
FILE NAME =	USER NAME = kellers	DESIGNED - D.A.D.	REVISED - 03-15-01
ce:\pwork\NP\WIDOT\KELLERS\03131400\Dist.dgn		DRAWN - R.W.P.	REVISED - BUR. TRAFFIC 01-01-02
PLOT SCALE = 5/8"=1'-0"		CHECKED - D.A.Z.	REVISED -
PLOT DATE = 3/23/2009		DATE - 05-30-00	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2009-017 I	WILL	16	15
TS-05			CONTRACT NO. 60G16	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SCALE: NONE SHEET NO. 3 OF 4 SHEETS STA. TO STA.



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

