### STATE OF ILLINOIS

## DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS**

#### FOR INDEX OF SHEETS, SEE SHEET NO. 2

THE IMPROVEMENT IS LOCATED IN THE VILLAGE OF HILLSIDE

# PLANS FOR PROPOSED NOISE WALL REPAIR

F.A.I. ROUTE: 290 (INTERSTATE 290-WB)

LOCATION 2

IMPROVEMENT BEGINS STA. 311+090,889

IMPROVEMENT ENDS STA. 311+098.889

TWO LOCATIONS WEST OF WOLF ROAD

**SECTION: 2004-003 I COOK COUNTY** C-91-146-04

LOCATION 1

IMPROVEMENT BEGINS STA. 311+050,889 IMPROVEMENT ENDS STA. 311+062.889

#### TRAFFIC DATA

2002 ADT = 186,800 POSTED SPEED LIMIT= 55 MPH R. 12 E.

PROVISO TOWNSHIP

LOCATION 1. GROSS LENGTH OF IMPROVEMENT = 40 FEET

LOCATION 2. GROSS LENGTH OF IMPROVEMENT = 23 FEET

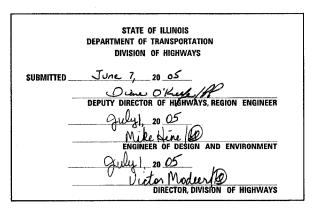
GROSS LENGTH OF IMPROVEMENT = 63 FEET

SECTION 290 2004-003 I

CONTRACT NO. 62720

D-91-146-04





PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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

**CONTRACT NO. 62720** 

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#### INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, SCOPE OF WORK, STATE STANDARDS, AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	CURRENT SURVEY DATA
5	NOISE WALL REPAIR DETAIL (DETAILS)
6 - 13	EXISTING NOISE WALL DETAILS (FOR INFORMATION ONLY)
14	TC-17 TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES, PARTIAL RAMP CLOSURES

#### LIST OF STATE STANDARDS

STANDARDS	DESCRIPTION
701400 - <i>02</i>	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401 - <i>03</i>	LANE CLOSURE, MULTILANE FOR SPEED >= 45 MPH
702001- <i>05</i>	TRAFFIC CONTROL DEVICES

SCOPE OF WORK:

(NOT IN ORDER OF PREFERENCE)

- 1. REMOVE THE THREE UNITS (2-LOCATION 1 AND 1-LOCATION 2) OF DAMAGED NOISE WALL PANELS AND THEIR CAPS.
- 2.CUT AND REMOVE THE UPPER SECTION OF DAMAGED POST, DESIGNATED D-59, (W8 X 31).
- 3. REMOVE 39'-0" OF THE DAMAGED BARRIER WALL. (AS SHOWN) (16'-0"- LOCATION 1 AND 23'-0" LOCATION 2)
- 4. PREPARE THE CUT SECTION OF D-59 FOR SPLICING TO A NEW W8 X 31 SECTION. (LOCATION 1)
- 5. SPLICE A NEW W8 X 31 SECTION OVER CUT SECTION OF D-59 USING A BUTT WELD AND ASSURING COMPLETE VERTICALITY AND PLUMBNESS OF THE NEW SECTION. (LOCATION 1)
- 6.STRAIGHTEN POSTS, D-58, D-65 AND D-66. (1-LOCATION 1 AND 2-LOCATION 2)
- 7. PAINT POSTS D-58, D-59, D-65 AND D-66 IN MATCHING COLORS WITH THE EXISTING POST'S COLOR, AS REQUIRED.
- 8.INSTALL THREE UNITS OF THE PRECAST NOISE WALL PANELS AND THEIR CAPS. (2-LOCATION 1 AND 1-LOCATION 2)
- 9.RECONSTRUCT THE 39'-0" SECTION OF BARRIER WALL. (AS SHOWN) (16'-0" LOCATION 1 AND 23'-0" LOCATION 2)
- 10. CLEAN THE CONSTRUCTION SITE, RESTORING THE SITE TO ITS ORIGINAL CONDITION AS CLOSE AS POSSIBLE.

290 2004-003 I COOK 14 2 STA. TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT CONTRACT NO. 62720

F.A.I. SECTION COUNTY

#### GENERAL NOTES:

- 1. IN EXISTING PLANS CALL OUT W200 X 46 (METRIC) SECTION IS EQUIVALENT TO W8X31 (ENGLISH).
- 2. PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM THE EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY AND APPROVED ADJUSTMENTS PRIOR TO THE CONSTRUCTION OR ORDERING OF MATERIALS. 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 AT THE UNIT PRICE BID FOR THE WORK.
- 3. THE CONTRACTOR SHALL USE EXTREME CARE DURING THE NOISE WALL REPAIR SUCH THAT NO DAMAGE OCCURS ON ANY OTHER PART OF THE NOISE WALL. IF ANY DAMAGE OCCURS DURING THE REPAIR THEN THAT SHALL BE CORRECTED AT CONTRACTOR'S EXPENSE.
- 4. ALL THE REPLACED UNITS, SUCH AS BARRIER WALL, NOISE WALL PANELS, NOISE WALL PANEL CAPS, AND NOISE WALL POSTS, SHALL BE IDENTICAL IN DESIGN, -PATTERN AND COLOR TO THE EXISTING UNITS.
- 5. THE DAMAGED UPPER PORTION OF THE D-59 POST IN LOC, I SHALL BE CUT AND REMOVED AFTER LEAVING A LOWER 12" STRAIGHT SECTION OF THE POST, CUTTING, REMOVAL AND DISPOSAL OF STEEL SECTION ARE INCLUDED IN THE COST OF FURNISHING AND ERECTING STRUCTURAL STEEL. THIS STRAIGHT SECTION SHALL BE USED FOR CLAMPING AND SHALL BE GROUND SMOOTH TO ASSURE A GOOD QUALITY BUTT WELD FOR SPLICING THE NEW W8 X 31 SECTION ON THE CUT SECTION OF THE D-59 POST, THE CUT SECTION SHALL RENDER A CUT SURFACE THAT SHALL ENSURE VERTICAL SPLICING OF THE NEW SECTION AND ASSURE THE FULL PLUMBNESS OF THE NEWLY SPLICED SECTION FOR THE INSTALLATION OF THE NEW PRECAST PANELS, PREPARING AND WELDING IS INCLUDED IN THE COST OF FURNISHING AND ERECTING STRUCTURAL STEEL.
- 6. THE SPLICING OF THE D-59 POST @ LOCATION 1 SHALL CONFORM TO THE RELEVANT THE SPLICING OF THE D-59 POST @ LOCATION 1 SHALL CONFORM TO THE RELEVANI REQUIREMENTS OF SECTION 512 OF THE STANDARD SPECIFICATIONS.

  OTHER TYPES OF SPLICING MAY BE ALLOWED SUBJECT TO THE APPROVAL OF THE ENGINEER. ANY PROPOSAL BY THE CONTRACTOR TO USE AN ALTERNATE SPLICE METHOD MUST INCLUDE ADEQUATE DOCUMENTATION DEMONSTRATING THAT FULL TENSION, SHEAR AND BENDING CAPACITIES WILL BE MET AND IT WILL NOT INTERFERE WITH THE PANEL'S ERECTION. APPROPRIATE WELDER QUALAFICATIONS WILL BE REQUIRED FOR POSITIONS AND PROCESSES USED IN WELD SPLICING THE POST, NONDESTRUCTIVE TESTING OF COMPLETED WELDS WILL BE LIMITED TO VISUAL INSPECTION.
- 7. THE CONTRACTOR SHALL WORK IN A FASHION SUCH AS TO CAUSE MINIMAL INCONVENIENCE AND DELAYS TO THE MOTORING PATRONS.
- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, WATER, CABLE, GAS AND OTHER UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
- 9. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY
- 10. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- 11. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTION IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
- 12. ANY DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE AREA OF CONCRETE REMOVAL SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 13. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4151 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- 14. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTIES AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- 15. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS,

LEGEND: LOC. = LOCATION

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION		
NAME	DATE	INTERSTATE 290		
		NOISE WALL	. REPAIR	
		INDEX OF SHEETS,	GENERAL NOTES	
		& STATE ST	TANDARDS	
		SCALE: VERT. HORIZ.	DRAWN BY: SB/MVT	
		DATE: MAY, 2005.	CHECKED BY: RSS	

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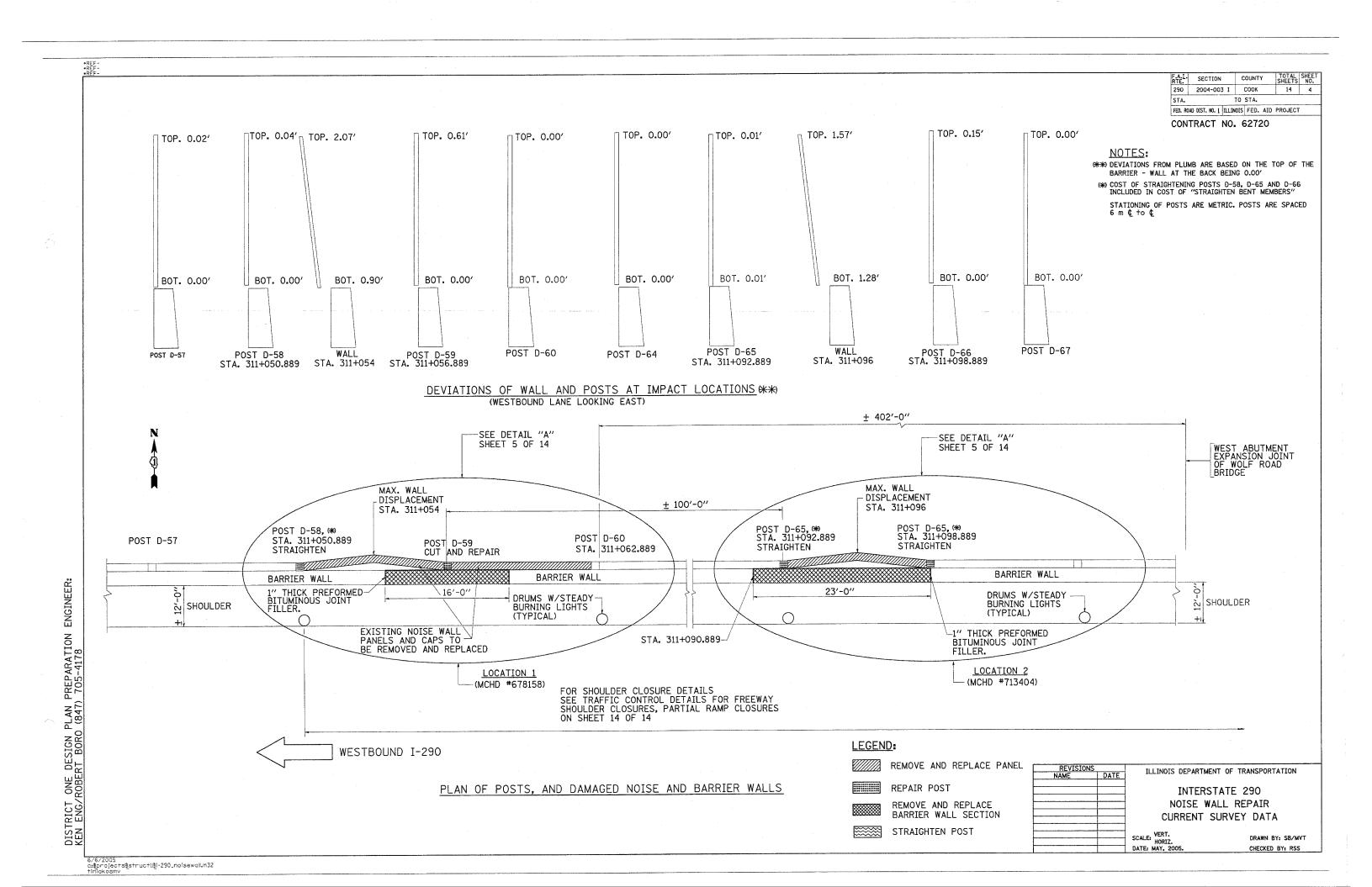
F.A.L.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2004-003 I	COOK	14	3
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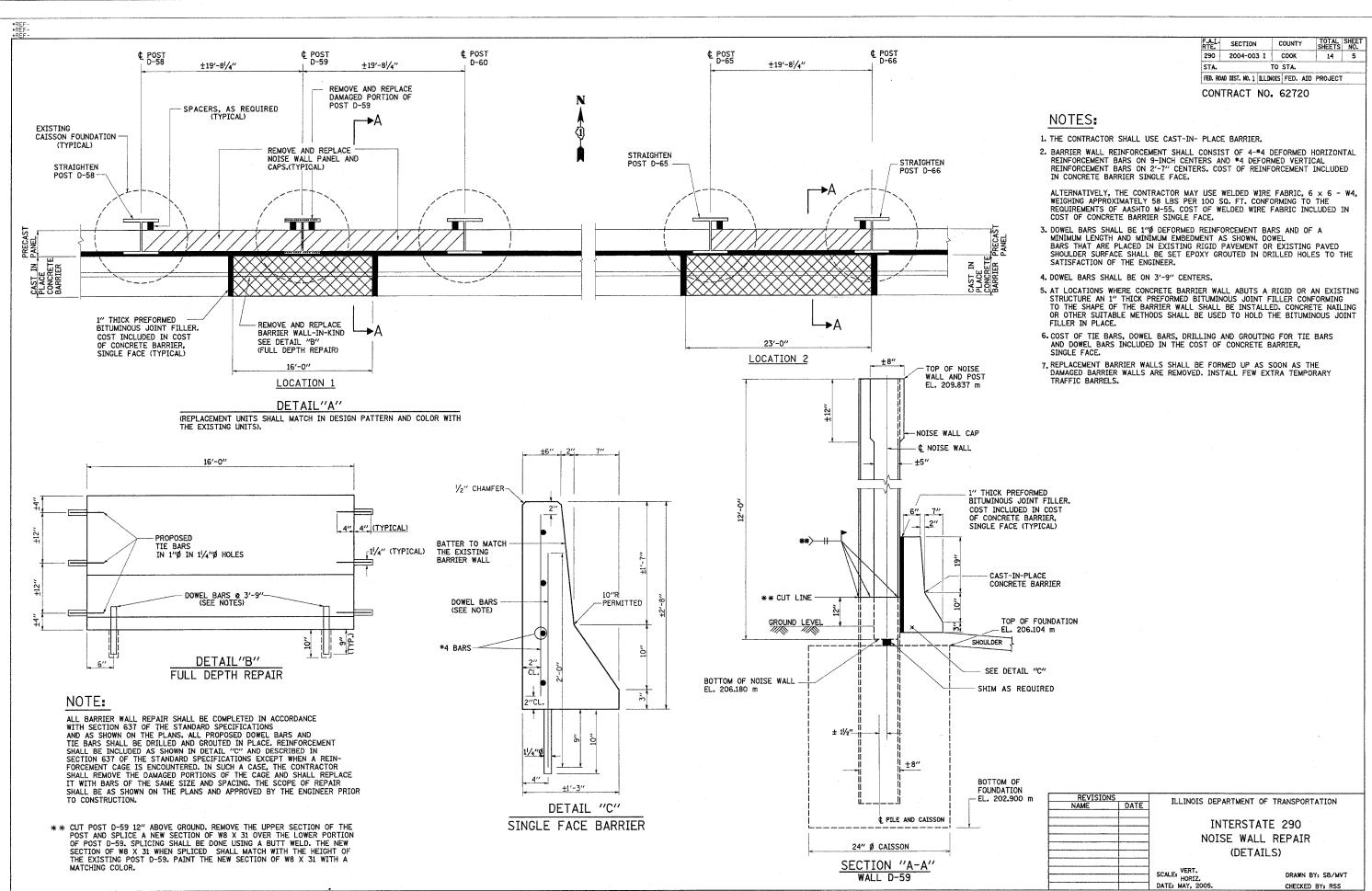
CONTRACT NO. 62720

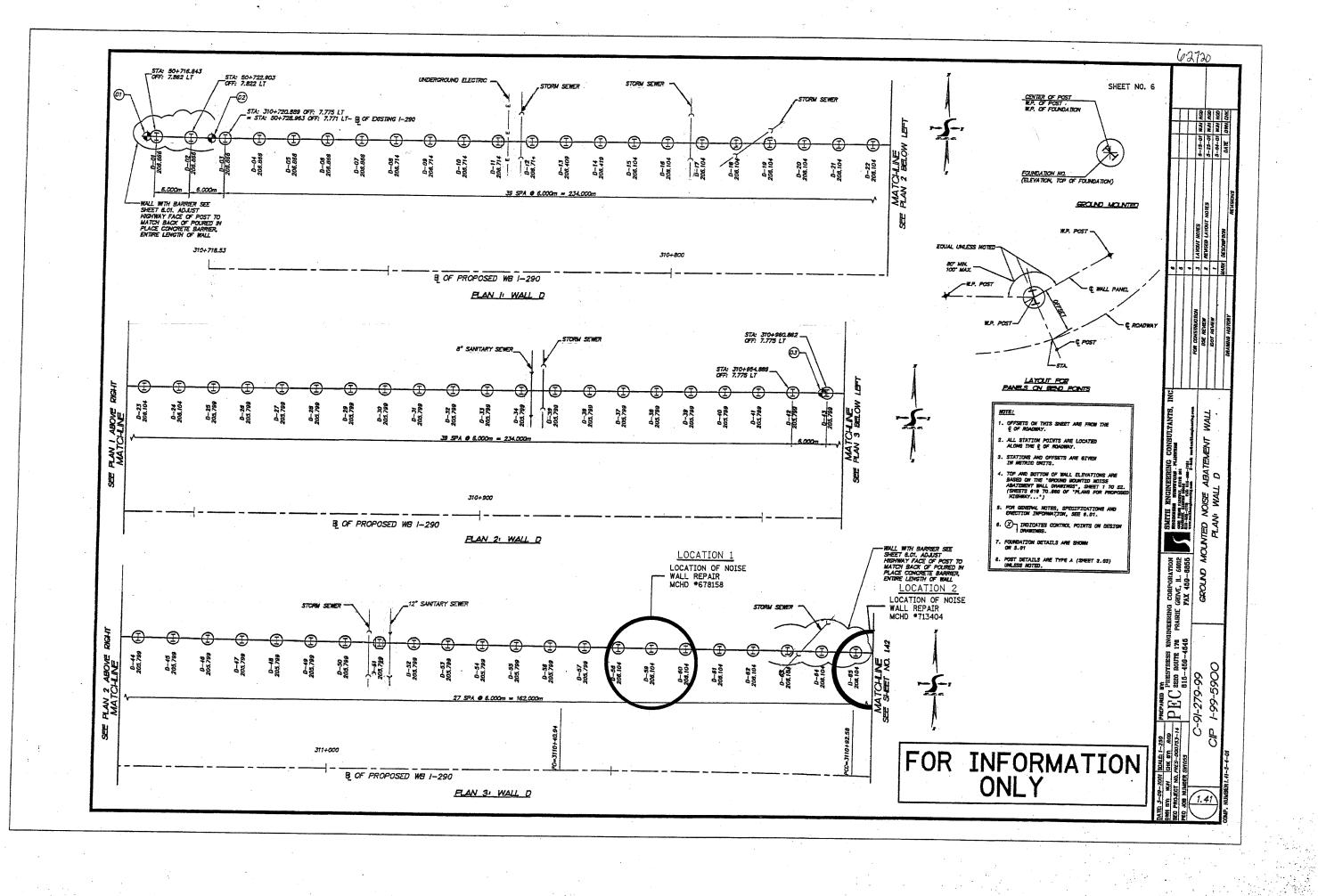
				LOCATION 1	LOCATION 2
				MCHD No. 678158	MCHD No. 713404
	SUMMARY OF QUANTITI	<u>ES</u>	UR BAN TOTAL	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A
CODE NO.	ITEM DESCRIPTION	UNIT	QUANTITY	QUANTITY	QUANTITY
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	400	400	
X0301423	NOISE ABATMENT WALL, GROUND MOUNTED	SQ. FT.	711	474	237
63700600	CONCRETE BARRIER, SINGLE FACE (SPECIAL)	FOOT	39	16	23
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L.SUM	i	0.5	0.5
67100100	MOBILIZATION	L.SUM	1	0.5	0.5
50102400	CONCRETE REMOVAL	CU. YDS.	3.3	1.3	2.0
X7015000	CHANGEABLE MESSAGE SIGN	CAL MO	1	0.5	0.5
X7013820	TRAFFIC CONTROL SURVEILLANCE, EXPRESSWAYS	CAL DA	30	15	15
X0322390	STRAIGHTEN BENT MEMBER	L.SUM	1	0.3	0.7

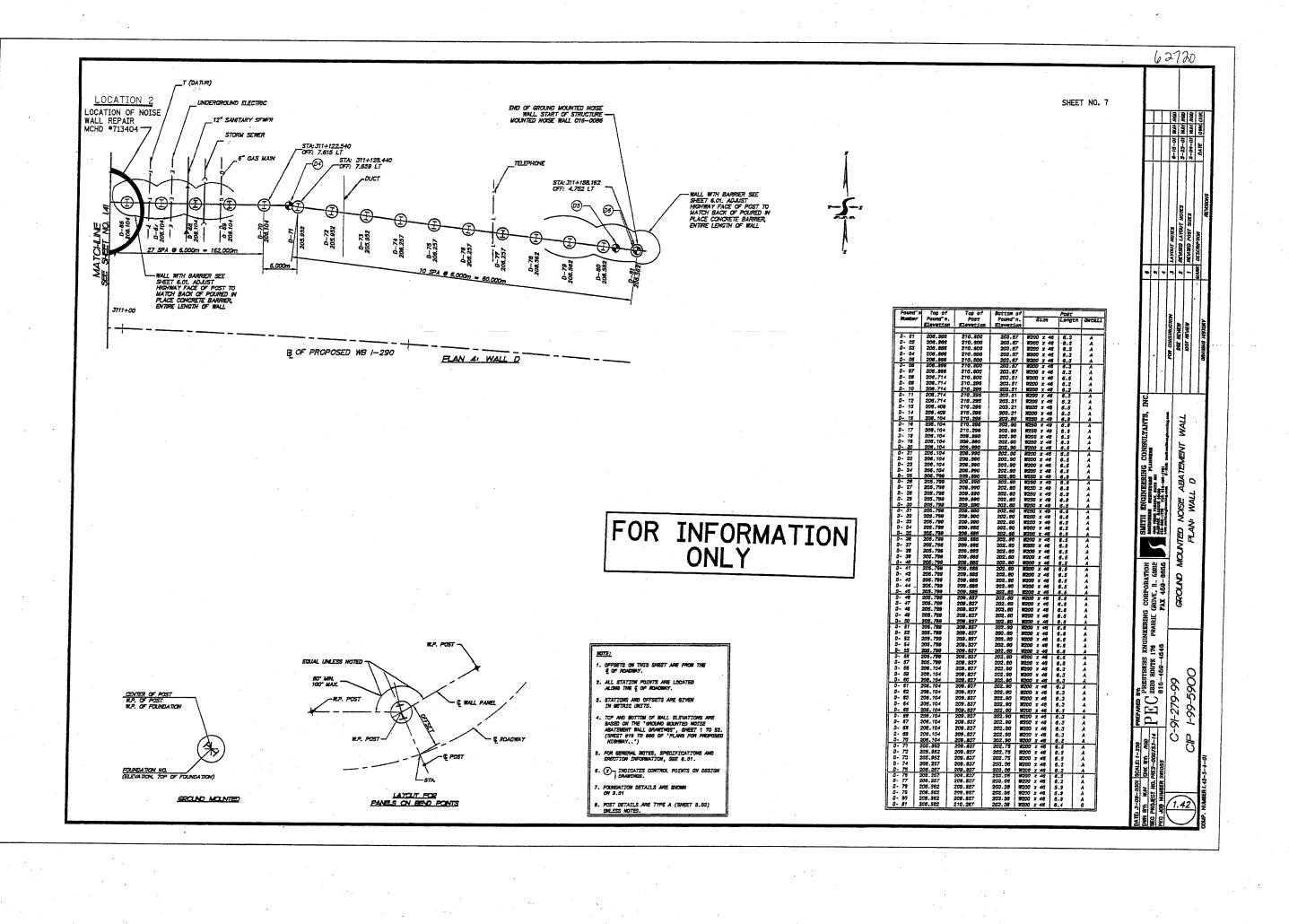
ILLINOIS DEPARTMENT OF TRANSPORTATION		
TATE 290		
ALL REPAIR		
JEE 1/E1 7/41/		
F QUANTITIES		
DRAWN BY: SB/MVT		

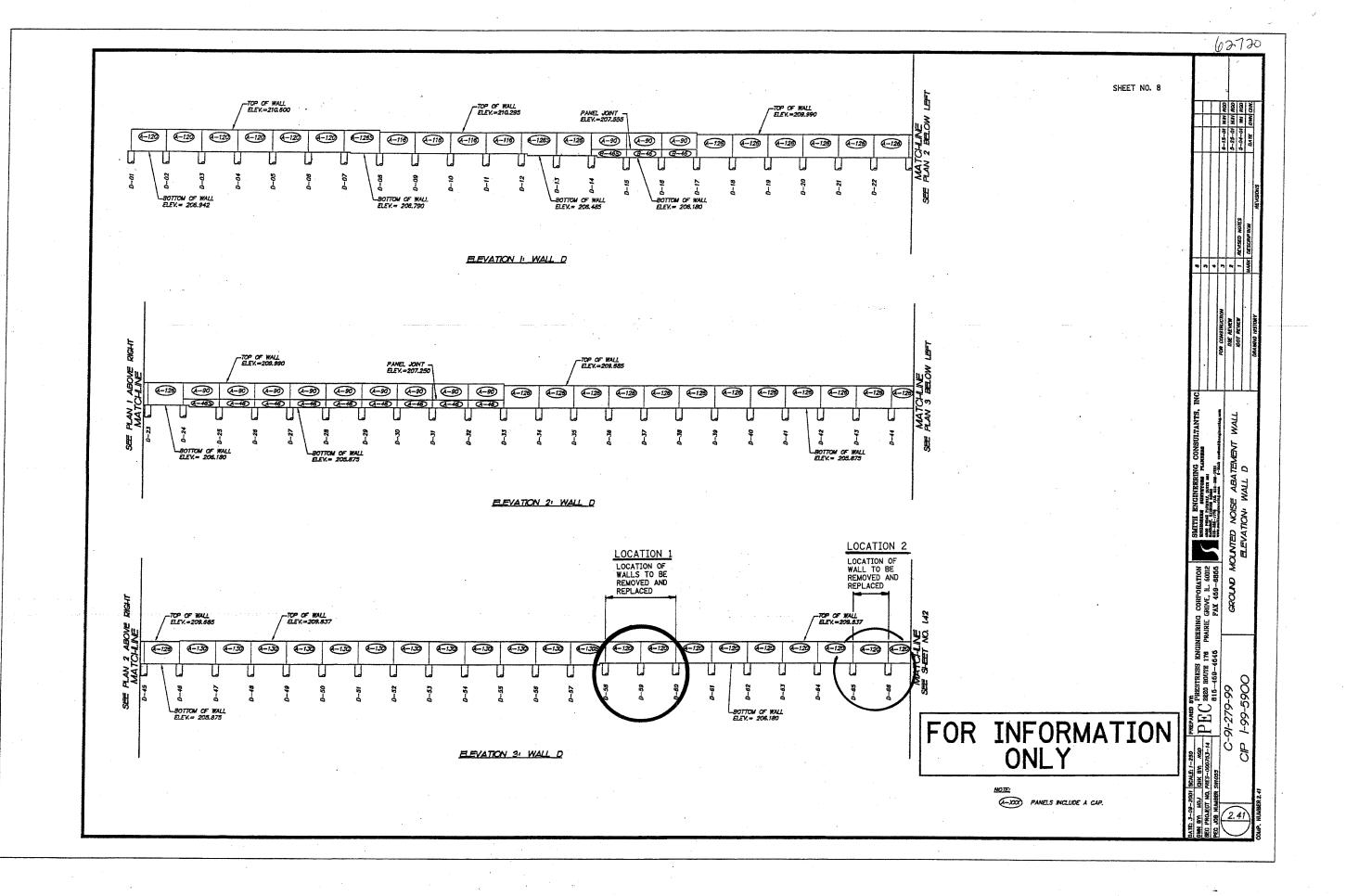
6/6/2005

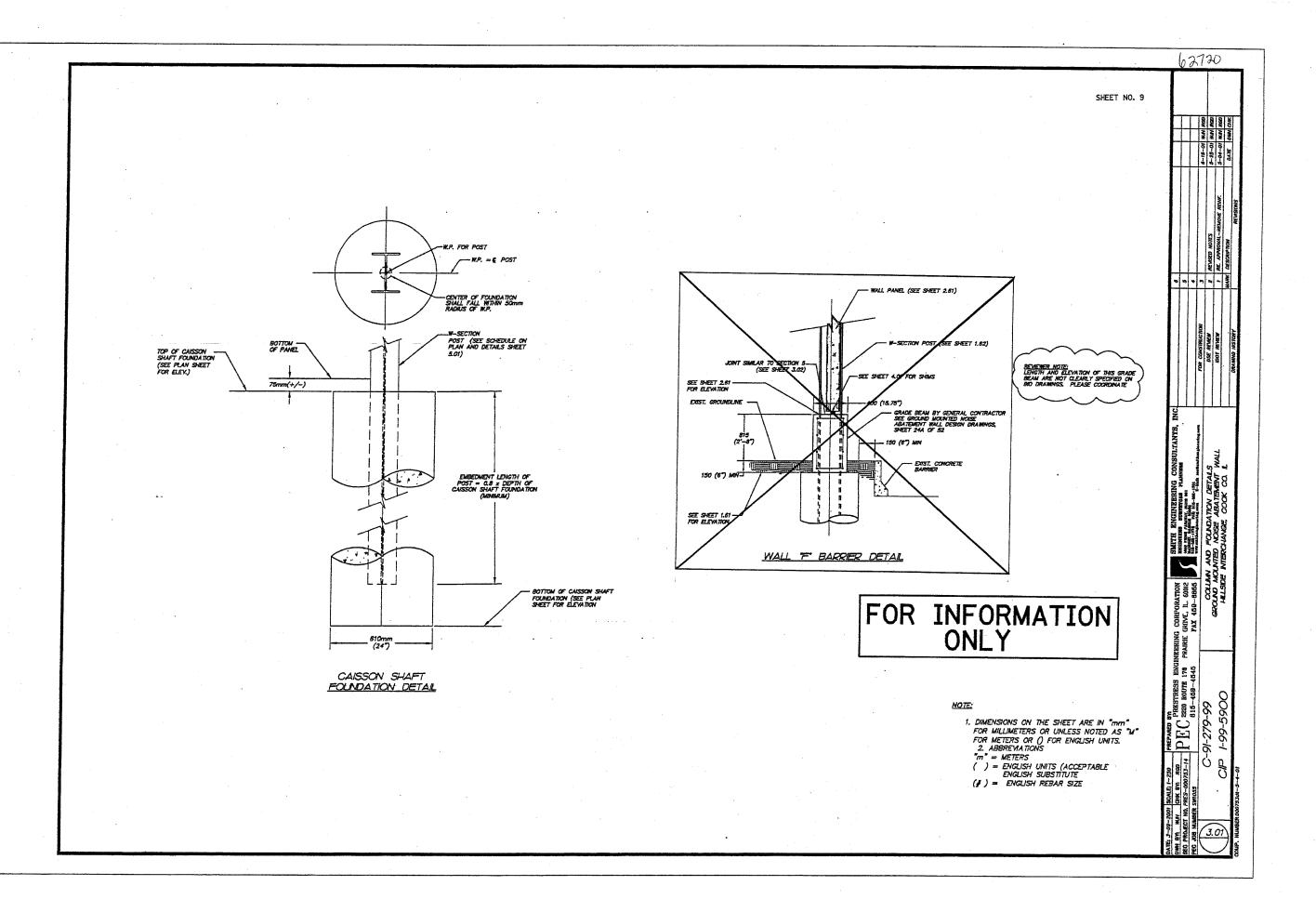




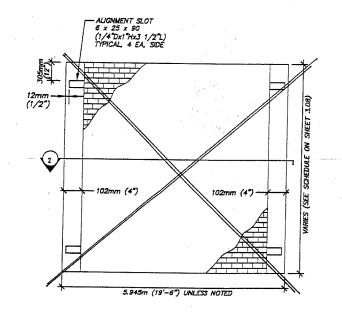




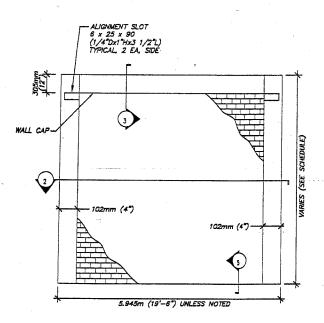




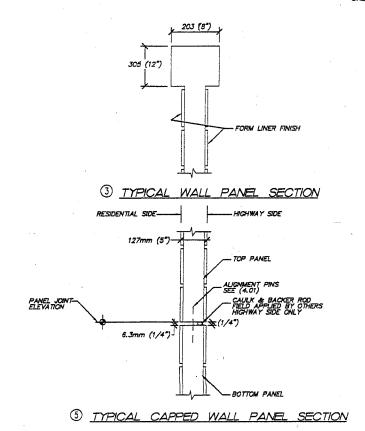
SHEET NO. 10



BOTTOM WALL PANEL ELEVATION



CAPPED WALL PANEL ELEVATION



FOR INFORMATION ONLY

APPROVED For Main Dimensions and Materials Only 220 PREPARED BY, RGD
RGD
R733-14 PHC 2220 NOUTE 176
815-459-4545

JUL 06 2001

Rolph E. Andrew

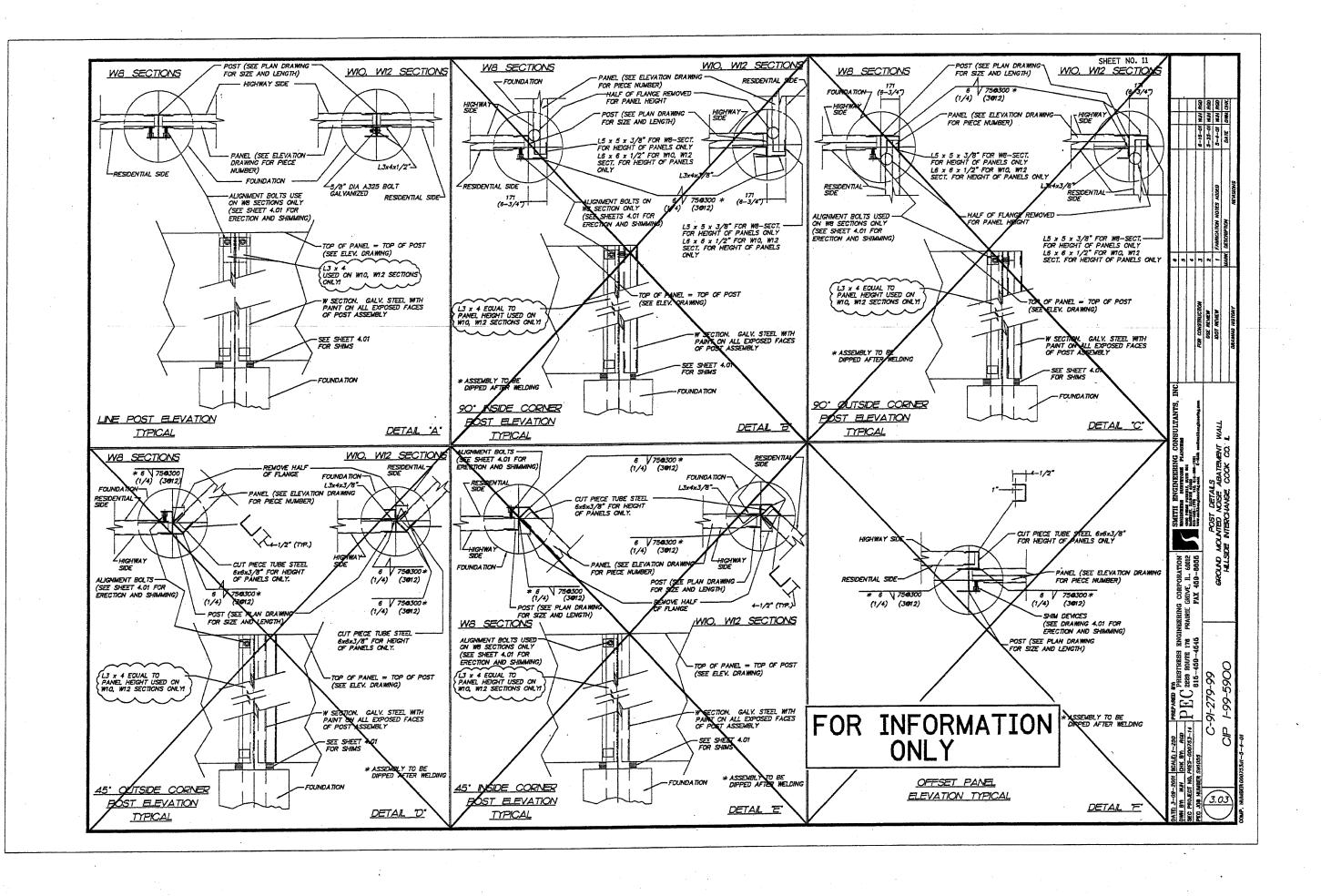
Grapiness of Bridges and Traffic Structure

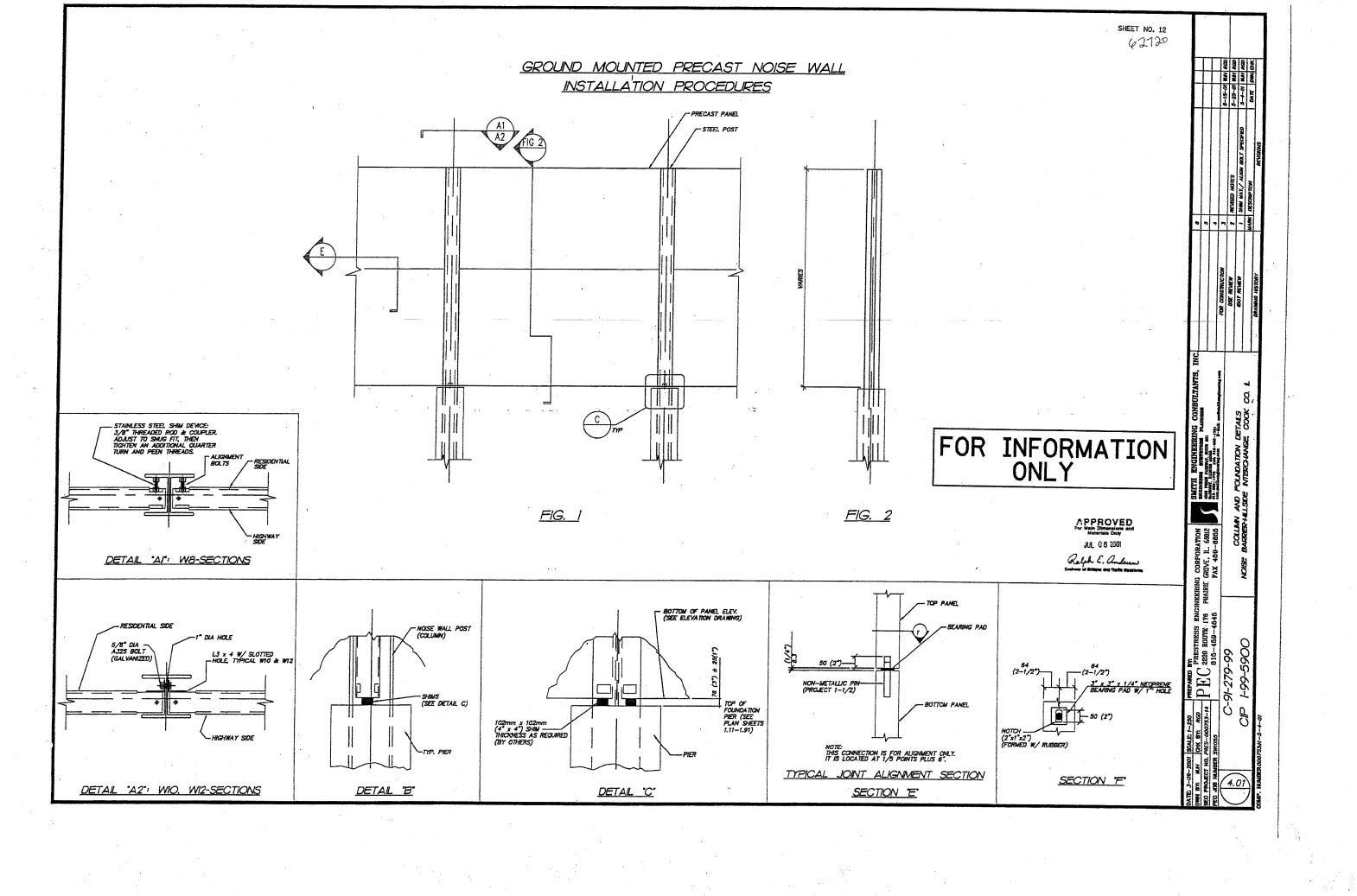
NOTE:

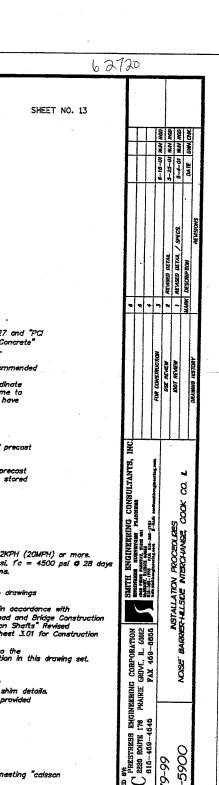
1. REINFORCING BAR DESIGNATIONS SHOW THE SMALLEST METRIC AND (SMALLEST ENGLISH) BARS WHICH WILL MEET DESIGN REQUIREMENTS. ENGLISH SIZES NOTED IN (PARENTHESIS).

- ¥	'9.5mm (3/8")	102mm (4")	SPLIT F NOMINA 406mm	ACE FORM LINER FINISH L BRICK SIZE x 203mm (16°x8°)
12/5mg	- N	*	•	
	(3/8")			
٠.	9.5mm	777	YP. POST SPACING — 6:000m (19"-8 1/4")  TYP. PANEL = 5.945M (19"-6")	

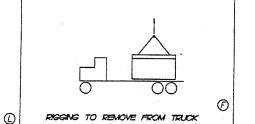
2 TYPICAL WALL PANEL SECTION

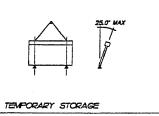


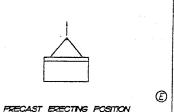




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LANDSCAPE PER DESIGN DRAWING

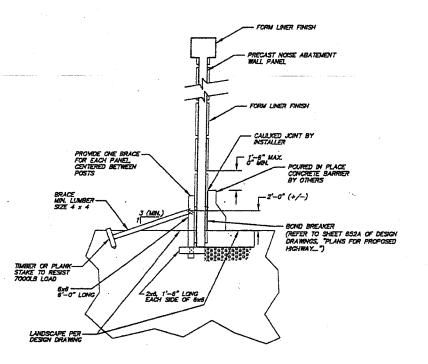
INSTALLATION DETAIL

- ERECT COLUMNS FIRST

FLAN

TYPICAL PRECAST

EXECTION SEQUENCE



#### CONSTRUCTION DETAIL AT BARRIER WALLS

THE ABOVE DETAIL APPLIES
TO THE FOLLOWING WALL LENGTHS:
- WALL 8 - 54m (POSTS 8-14 TO END OF WALL 8)
- WALL 0 - 480m (ENTIRE LENGTH)
- WALL C - 498m (ENTIRE LENGTH)
- WALL L - 98m (START OF WALL L TO POST L-17)

REMOVE TEMPORARY BRACES AFTER POURED IN PLACE CONCRETE BARRIER CONCRETE HAS CURED FOR A MINIMUM OF 24 HOURS.

FOR INFORMATION ONLY

## NOTES

General
A. Fleid tolerance is in accordance with PCI MNL 127 and "PCI Recommended Practice for Erection of Precast Concrete with the exception of the Center of the Caisson.

with the exception of the Center of the Caisson.
(See Detail on Sheet 3.01)

8. Erection tolerances in accordance with "PCI Recommended Practice for Erection of Precast Concrete."

C. Contractor must be aware and prepared to coordinate shipments that allow for the least amount of time to unload for the products shipped. Contractor will have one hour to unload per truck. Shipments will consist of two to four pieces per truck load. In the unlikely event of an excessive amount of wait—time the load will either be off—loaded or returned to precast supplier.

D. Contractor to provide ample room for delivery of precast product in an area of flat, level ground on soils suitable to support wheel & autrigger loads.

E. Contractor must provide on area for storage of precast products on firm, level ground. Product must be stored on edge, as delivered until time of erection in properly designed storage racks (by Contractor).

properly designed storage racks (by Contractor).

Items provided by the Installation Contractor.

All shims under panels.

Caulk and backer rod.

G. Items provided by precast supplier:
 Steel Posts
 Precast Panels

H. Panel should not be erected in wind speeds of 32KPH (20MPH) or more. 1. Minimum concrete strength at stripping – 2000 psi, fc = 4500 psi & 28 days. 3. Repair of panels is per Manufacturers Specifications.

II. Drilled Caisson Shaft Installation

- Auger hole to required depths. See precast shop drawings for pier locations. Dewater as necessary.

- Drilled caisson foundations shall be constructed in accordance with Article 734 of the Standard Specifications for Road and Bridge Construction (1997) and Guide Bridge Special Provision "Caisson Shafts" Revised July 30, 1998 except as modified herein. See sheet J.01 for Construction Details

Place f'c = 4000 psi concrete in augured hole to the elevations specified as "Top of Foundation" elevation in this drawing set.
 III. Panel Installation

instaliction
Preset posts to the necessary elevation to
obtain top of precast elevations specified on the
layout drawings 2.01 through 2.32. See 4.01 for shim details.
Erect precast panel on the shims and into slot provided
in steel post (reference figure 1 on sheet 4.01)

Release panel from the crane.

- Alignment shim devices shall be installed before

installing panel above.

IV. Material Specifications

— Precast Concrete: fc = 4,500 psi © 28 days

Density = 150 pcf
Caisson Concrete: IDOT Class St (fc'=4000 psi) meeting "caisson shafts" special provision.

Reinforcing Steel: ASTM A615, fy = 60,000 psi

Steel posts ASTM A35, fy = 35000 psi, (or ASTM A709, fy = 50,000 psi) Welded wire fabric: ASTM A497, fy = 70,000 psi

\* (Caisson design is based on fc = 4,000 psi (at 14 days) V. All posts will be galvanized according to AASHO M111 and ASTM A385. Exposed Areas of posts will be painted as required by the special consistens.

