Appendix H

Structure Submittals and Approvals

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Type, Size, and Location Drawings	Appendix H-2

Appendix H-1

Bridge Condition Report Approval Letter

Illinois Department of Transportation
Division of Highways / Bureau of Bridges and Structures
2300 South Dirksen Parkway, Springfield, Illinois 62764

RECEIVED
JAN 27 2014
URS

January 24, 2014

City of Decatur
Section 09-00933-00-BR

SN 058-3013
058-3014

F.A.U. 7448 (Brush College Road) over Norfolk Southern Rail Yard

Honorable Mike McElroy
Mayor
City of Decatur
1 Gary K. Anderson Plaza
Decatur, Illinois 62523

Dear Mayor McElroy:

We have finished our review of the bridge condition reports (BCRs) for the above-designated project. We concur with the scope of work and the BCRs are hereby approved.

Approval of the project is contingent on approval by others of the proposed geometry, obtaining environmental signoffs, any required historic structure coordination and other approvals required by statutes or the policies of the Department.

One copy of the approved report is being returned to you and to the consultant, URS, Inc. If you have any questions, contact Matt Humke at 217/782-5929 or matt.humke@illinois.gov.

Sincerely,

D. Carl Puzey
Acting Engineer of Bridges and Structures

By: Timothy A. Armbrecht
Acting Engineer of Structural Services

MDH/kkt0583013 3014-20140124
cc: Roger L. Driskell, District 7 / Attn: Maureen E. Kastl
URS, Inc. / Attn: Keith Benting

Appendix H-2

Type, Size, and Location Drawings

Illinois Department of Transportation
Division of Highways / Bureau of Bridges and Structures
2300 South Dirksen Parkway, Springfield, Illinois 62764

January 24, 2014

City of Decatur
Section 09-00933-00-BR

SN 058-9202
058-9203

F.A.U. 7448 (Brush College Road) & F.A.U. 7369 (Faries Parkway)

Honorable Mike McElroy
Mayor
City of Decatur
1 Gary K. Anderson Plaza
Decatur, Illinois 62523

Dear Mayor McElroy:

The preliminary bridge designs, dated May 9, 2013 and June 10, 2013, for the above-designated project are satisfactory based on your consultant's disposition and revised Type, Size, & Location drawings, received by e-mail correspondence on December 11, 2013, which adequately address our review comments. The preliminary bridge designs are hereby approved.

The preliminary bridge design, form BLR 10210, indicates the City would like to have the Department perform the steel fabrication inspection. Please note a letter requesting fabrication inspection should be sent to the Bureau of Bridges and Structures (BBS) as soon as possible after the steel fabricator is determined. The letter (see attached example) should include the following:

1. Job information (structure number, route, section, county, IDOT contract # if applicable, C-# if applicable).
2. Point of contact for questions and who to send reports to at job completion; name, contact and location for fabricator and prime contractor.
3. The approximate start date and duration if known.

This request essentially authorizes the BBS' fabrication inspector to act as the City's representative. The inspector will need a copy of the shop drawings, approved by either this office or the City's consultant. If the shop drawings were not reviewed by the BBS, a second copy should also be provided to the BBS for office use in assisting the inspector with technical or interpretation questions. The inspector and this office will also require reference copies of any special provisions or project-specific specifications applicable to fabrication that are different from IDOT's Standard & Supplemental Specifications.

Please be aware fabrication inspection services supplied by the Department are subject to resource availability and are not guaranteed. In particular, if the fabricator is located outside the area served by Department inspectors, it may be necessary for the City to retain the services of their own fabrication inspection service to ensure the inspection of the steel.

The final structural plans and specifications for this project may be accepted by the District based on the Structural Engineer's seal, certification and signature per BLRS Manual Section 23-7.02.1. If you have any questions, contact Matt Humke at 217/782-5929 or matt.humke@illinois.gov.

One copy of the approved report is being returned to you and to the consultant, URS, Inc.

Sincerely,

D. Carl Puzey
Acting Engineer of Bridges and Structures

Timothy A. Armbrecht

By: Timothy A. Armbrecht
Acting Engineer of Structural Services

MDH/kkt0589202 9203-20140124
cc: Roger L. Driskell, District 7 / Attn: Maureen E. Kastl
URS, Inc. / Attn: Keith Benting

Benchmark:

"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

Existing Structure:

Stucture No. 058-3013 and 058-3014 are subways that were built in 1929 and extended in 1951. They carry the Norfolk Southern Rail Yard over Brush College Road (2 Lanes) and the Illinois Central Railroad (1 track). The existing structures consist of a concrete deck on steel stringers with concrete piers and closed concrete abutments on spread footings. The length of the south subway is 121'± and the length of the north subway is 78.33'. The sections of the subway carrying the roadway will be bulkheaded at each end and filled. The portion carrying the Illinois Central Railroad track is to remain in place.

Traffic to be maintained on Brush College Road during construction utilizing staged construction and Temporary MSE walls.

Salvage: None

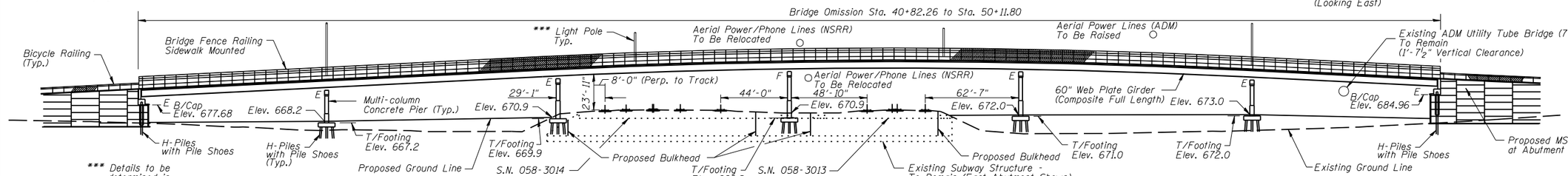
Sta. 95+65.3	Sta. 96+16.9	Sta. 96+66.4	Sta. 97+19.2	Sta. 97+95.3	Sta. 98+61.5	Sta. 99+34.4	Sta. 101+74.9	Sta. 102+25.3	Sta. 102+76.7	Sta. 103+90.1	Sta. 104+40.5
Elev. 654.66	Elev. 654.08	Elev. 653.57	Elev. 653.15	Elev. 652.66	Elev. 651.96	Elev. 651.25	Elev. 650.38	Elev. 651.41	Elev. 652.18	Elev. 652.58	Elev. 652.95

℄ N.S.R.R. W.B. Running Track Sta. 100+00 Elev. 650.83

Sta. 100+34.5 Elev. 650.61

TOP OF RAIL - ICRR

(Looking East)



ELEVATION

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
Directional Split: 50:50
ADTT: 7.4%
DHV: 1900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

LOADING HL 93

Allow 50#/sq. ft. for future wearing surface.

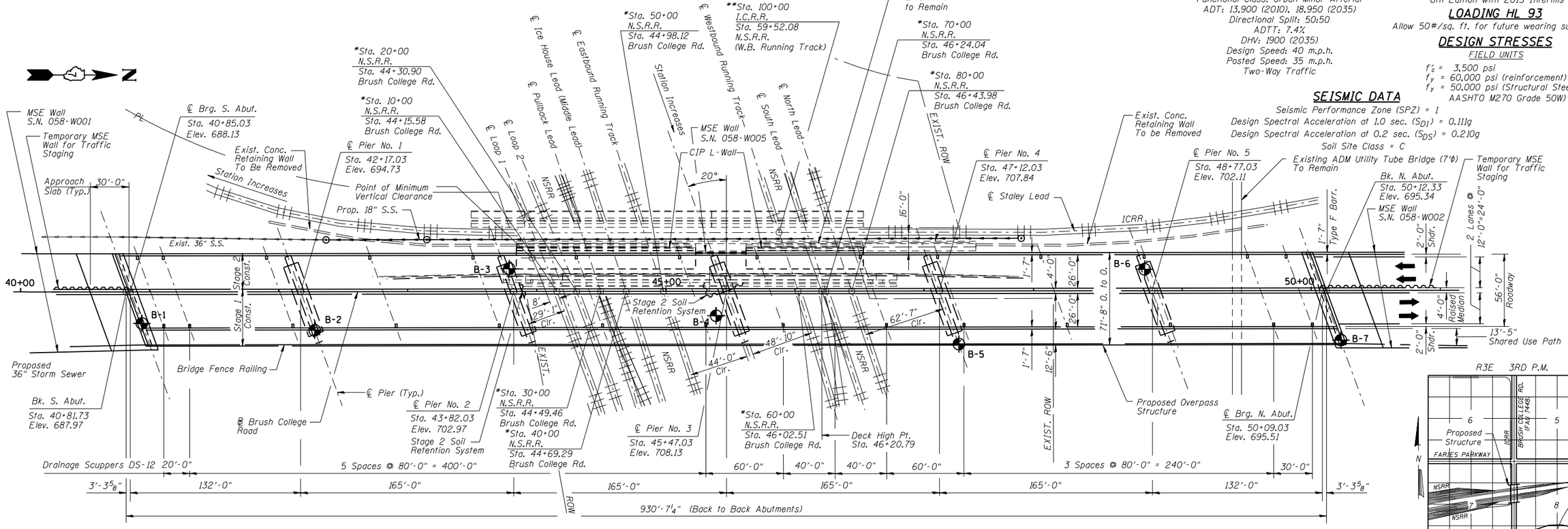
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (Structural Steel AASHTO M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.111g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.210g
Soil Site Class = C

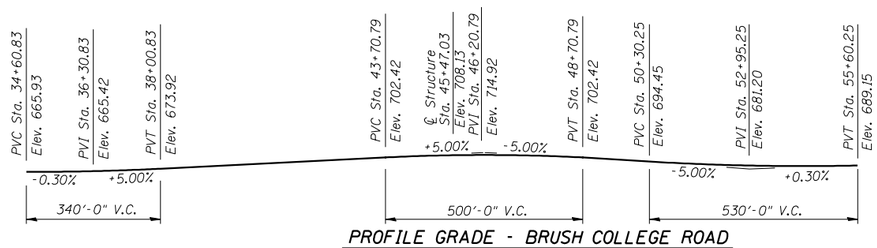


PLAN

* Plan Station = Val Map Station 72+74.0 (Val Map: 5-ILL.BD 20)

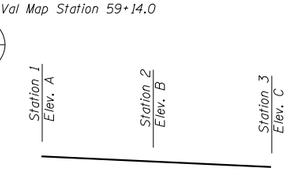
** Plan Station = Val Map Station 59+14.0 (Val Map: I-ILL-61 11b)

Track	Station 1	Elev. A	Station 2	Elev. B	Station 3	Elev. C
Loop 1	8+92.72	673.37	9+91.15	673.28	10+89.61	673.09
Loop 2	18+82.17	673.87	19+78.77	673.77	20+74.21	673.54
Pullback Lead	28+66.82	674.06	29+79.44	673.89	30+05.95	673.77
Ice House Lead	38+62.85	673.82	39+59.15	673.84	40+57.39	673.72
E.B. Running Track	48+84.55	673.66	49+87.43	673.66	50+85.42	673.60
W.B. Running Track	58+62.90	673.63	60+17.65	673.24	60+99.53	672.67
South Lead	68+61.62	673.88	69+70.17	673.89	70+97.13	673.39
North Lead	79+00.04	673.70	80+07.01	673.46	81+07.73	673.13



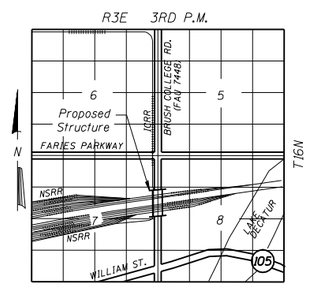
PROFILE GRADE - BRUSH COLLEGE ROAD

(Edge of Median)



TOP OF RAIL - NSRR

(Looking North)



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
FAU 7448 (BRUSH COLLEGE ROAD) OVER NSRR
SECTION 09-00933-00-BR
MACON COUNTY
STATION 45+47.03
STRUCTURE NO. 058-9203

URS

USER NAME =	DESIGNED - DCS/BMZ	REVISED
	CHECKED - KWB	REVISED
PLOT SCALE =	DRAWN - DCS	REVISED
PLOT DATE =	CHECKED - KWB	REVISED

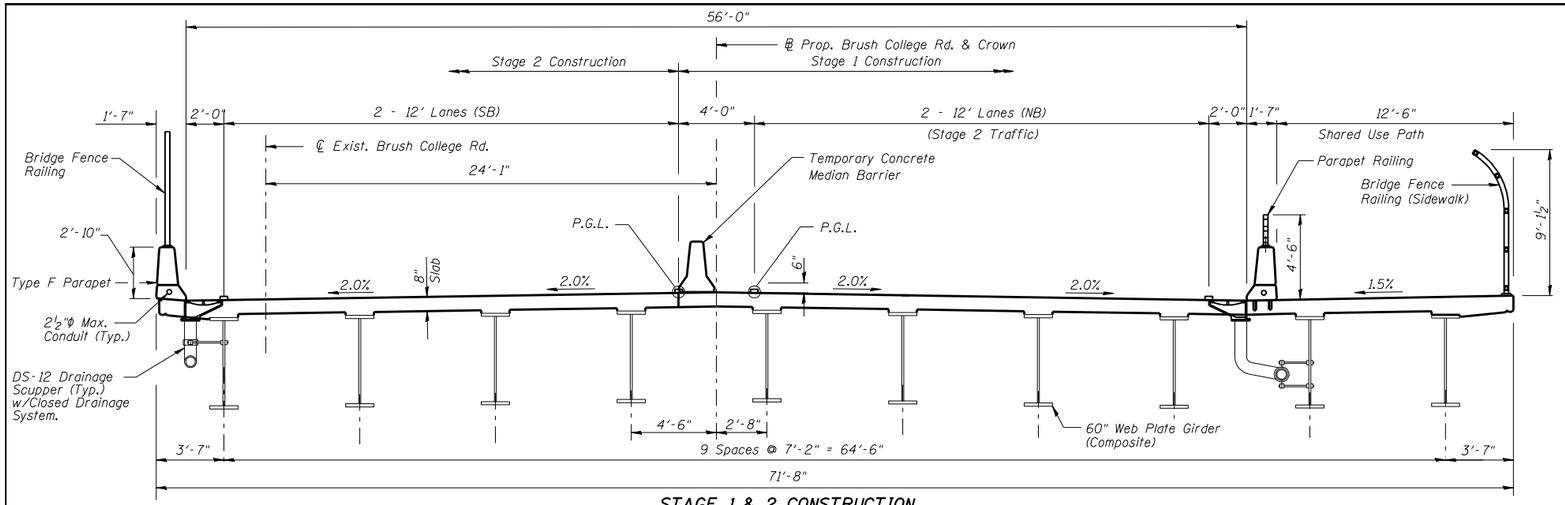
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

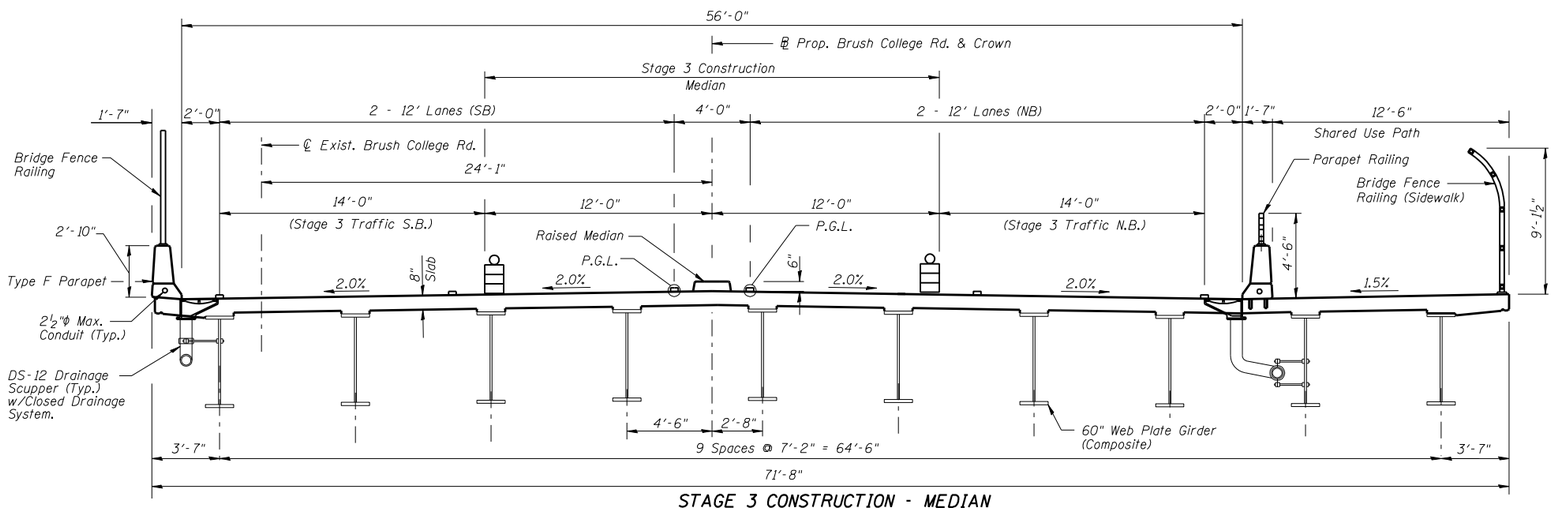
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON	2	1

CONTRACT NO.

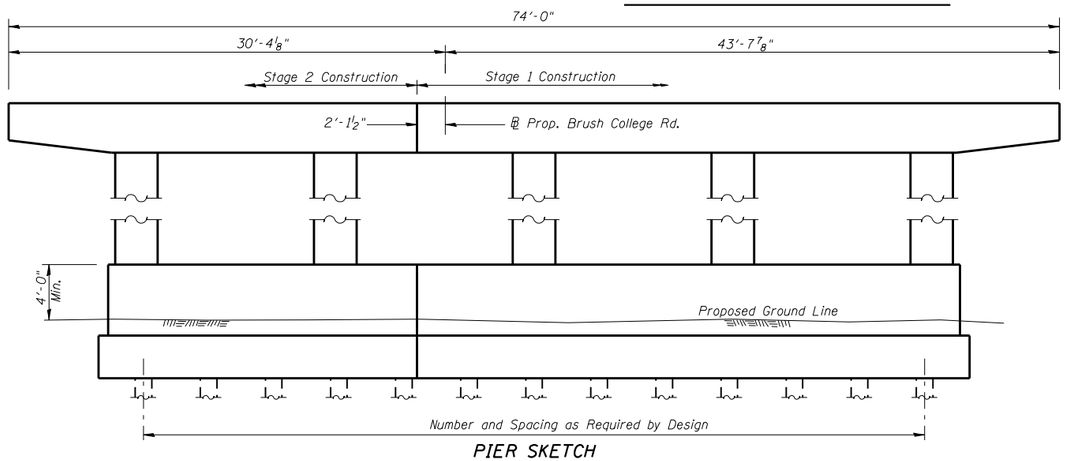
ILLINOIS FED. AID PROJECT



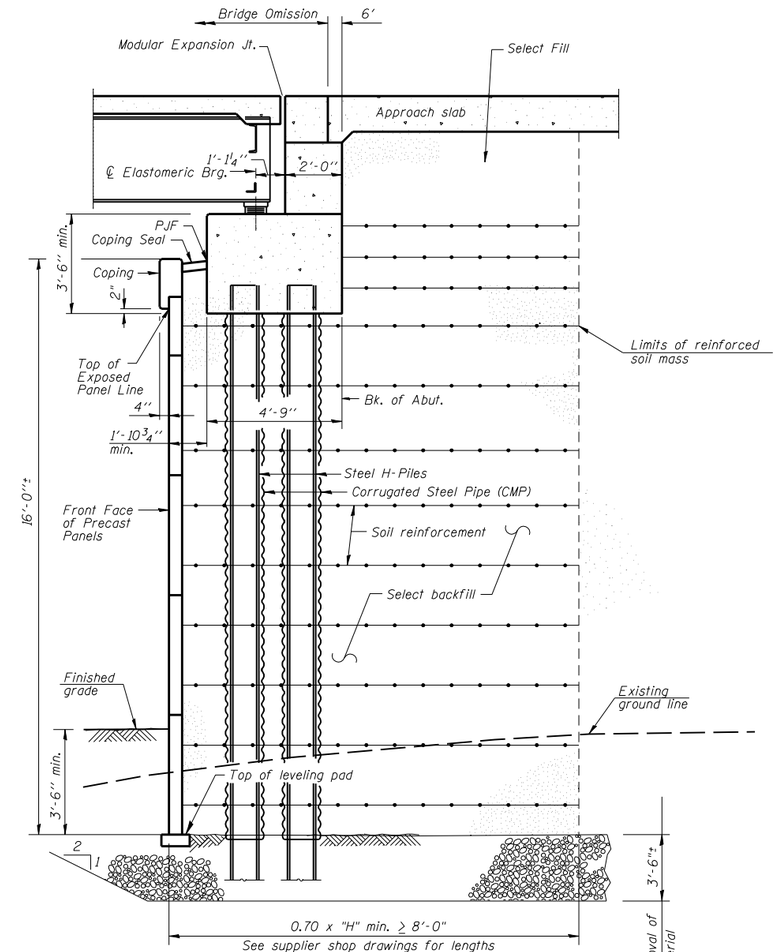
STAGE 1 & 2 CONSTRUCTION



STAGE 3 CONSTRUCTION - MEDIAN



PIER SKETCH



SECTION THRU ABUTMENT

(Horiz. dim. @ Rt. L's)

Notes:

1. Remove existing retaining walls north and south of existing pier 1'-0" minimum below ground line after MSE wall installation. Existing pier and west abutment to remain in place. A portion of the existng east abutment will be removed in order to construct Pier 2 and Pier 3.
2. Existing storm sewer and water main under Brush College Road Subway to be abandoned. Remove where conflicts with new pier locations. Other existing utilities and utility poles to be removed and relocated.
3. No freefall deck drains will be permitted in the spans over the tracks or within 10' of cross arms of a railroad pole line.

DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
OVER NSRR
SECTION 09-00933-00-BR
MACON COUNTY
STATION 45+47.03
STRUCTURE NO. 058-9203

URS	USER NAME =	DESIGNED - DCS/BMZ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 2 OF 2 SHEETS
		CHECKED - KWB	REVISED		
	PLOT SCALE =	DRAWN - DCS	REVISED		
	PLOT DATE =	CHECKED - KWB	REVISED		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON	2	2
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

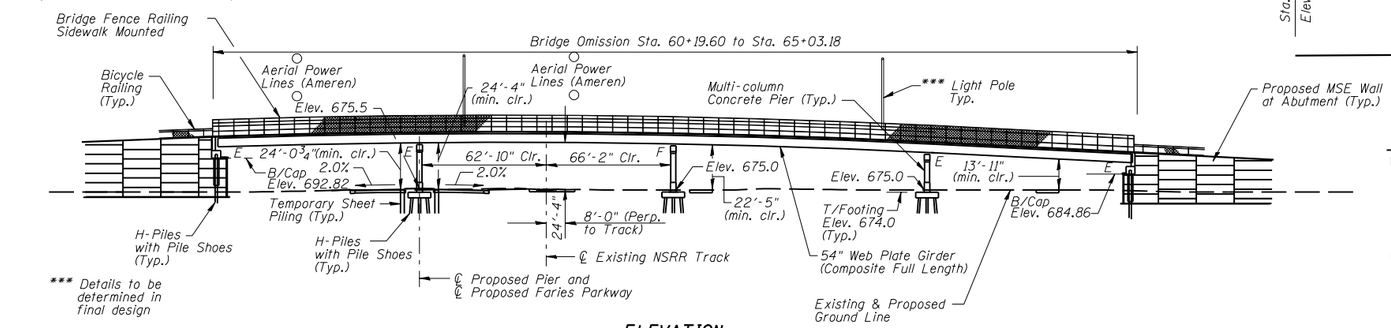
Benchmark:

"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

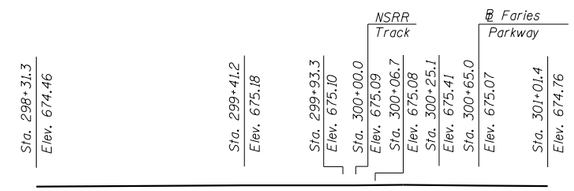
Existing Structure:

None

Brush College Road will be closed north of Faries Parkway during construction. Faries Parkway to remain open.

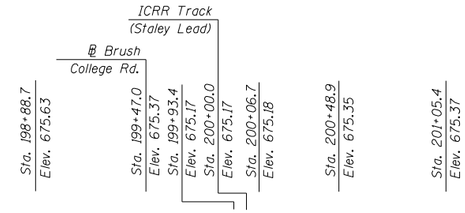


ELEVATION



TOP OF RAIL - ICRR

(Looking East)



TOP OF RAIL - NSRR

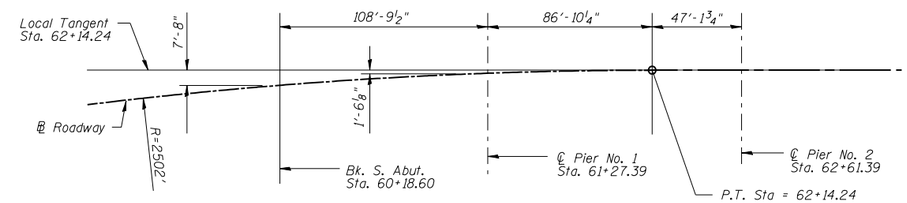
(Looking South)

PROP. CURVE BRUSH-6

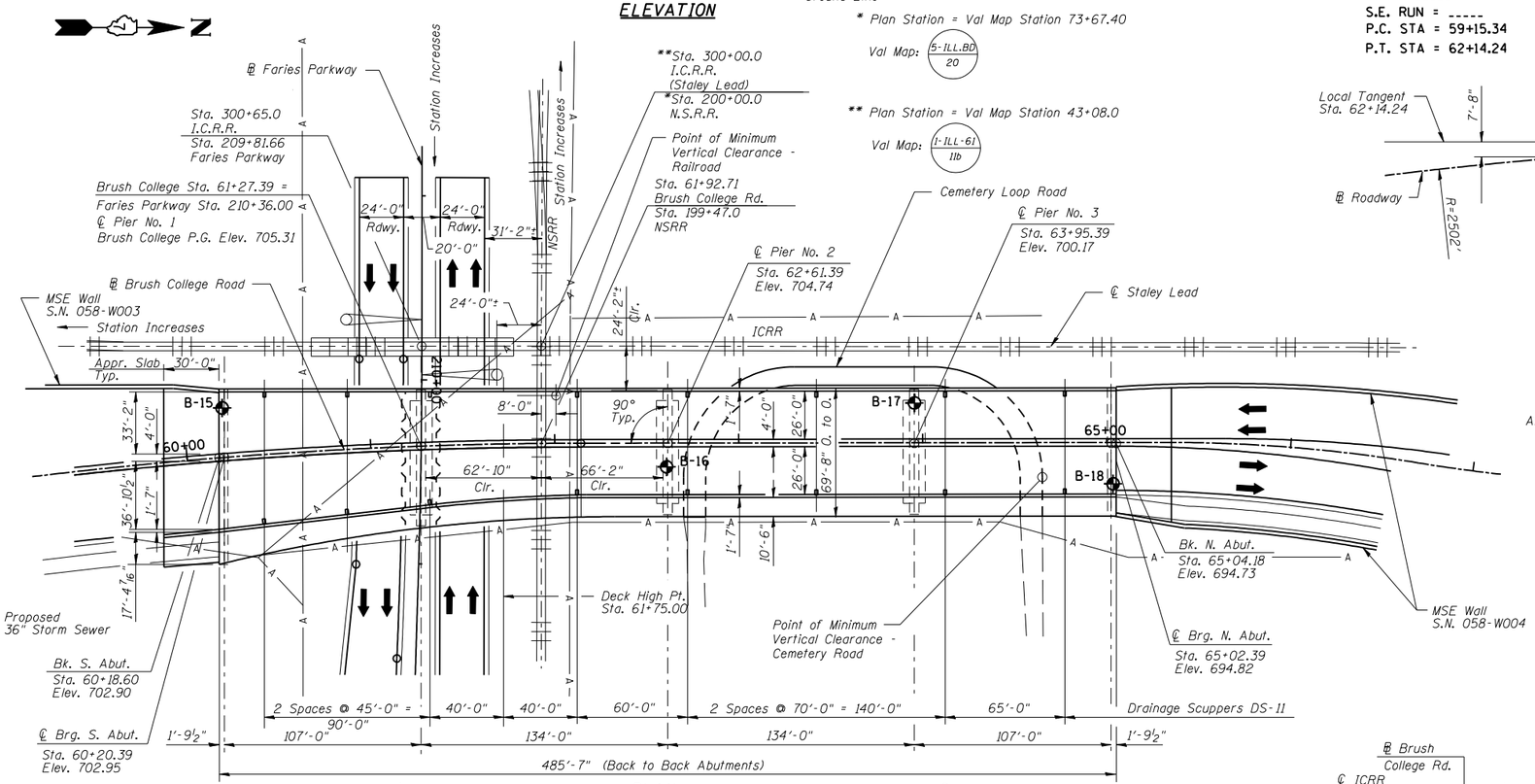
PI STA. = 60+64.97
Δ = 6° 50' 41" (RT)
D = 2° 17' 24"
R = 2,502.00'
T = 149.63'
L = 298.90'
E = 4.47'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA = 59+15.34
P.T. STA = 62+14.24

PROP. CURVE BRUSH-7

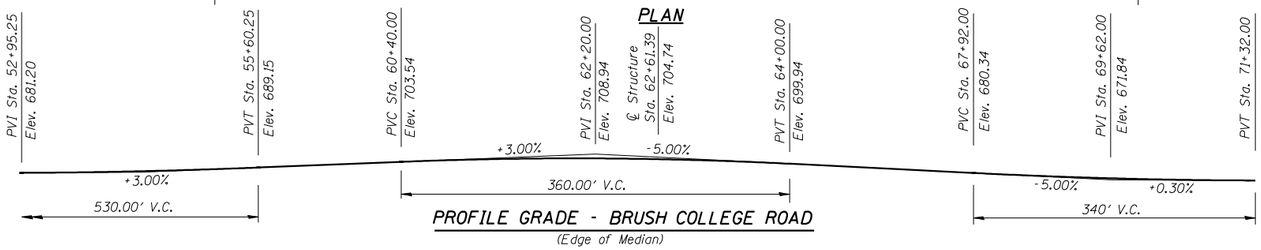
PI STA. = 66+01.57
Δ = 9° 27' 19" (RT)
D = 6° 51' 42"
R = 835.00'
T = 69.06'
L = 137.80'
E = 2.85'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA = 65+32.52
P.T. STA = 66+70.32



OFFSET SKETCH

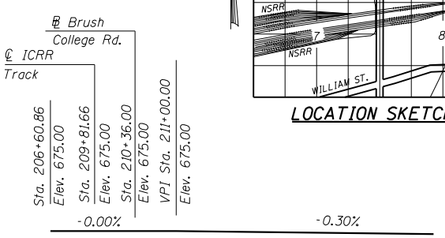


PLAN



PROFILE GRADE - BRUSH COLLEGE ROAD

(Edge of Median)



PROFILE GRADE - FARIES PARKWAY

(Along ℄)

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

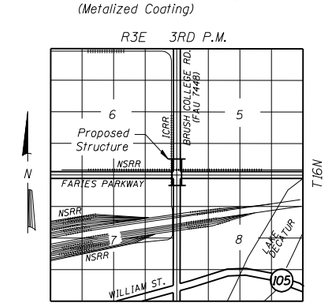
LOADING HL 93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (Structural Steel AASHTO M270 Grade 50) (Metalized Coating)



LOCATION SKETCH

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
Directional Split: 50:50
ADTT: 7.4%
DHV: 1900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

F.A.U. Rte. 7369 - Faries Parkway
Functional Class: Urban Minor Arterial (West of Brush College Rd.)
Urban Minor Collector (East of Brush College Rd.)
ADT: 8,400 (2010), 11,470 (2035) - West of Brush College Rd.
6,400 (2010) 8,740 (2035) - East of Brush College Rd.
Directional Split: 50:50
ADTT: 9.8% (West of Brush College Rd.)
6.6% (East of Brush College Rd.)
DHV: 1,150 (2035) - West of Brush College Rd.)
870 (2035) - East of Brush College Rd.)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.156g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.280g
Soil Site Class = D

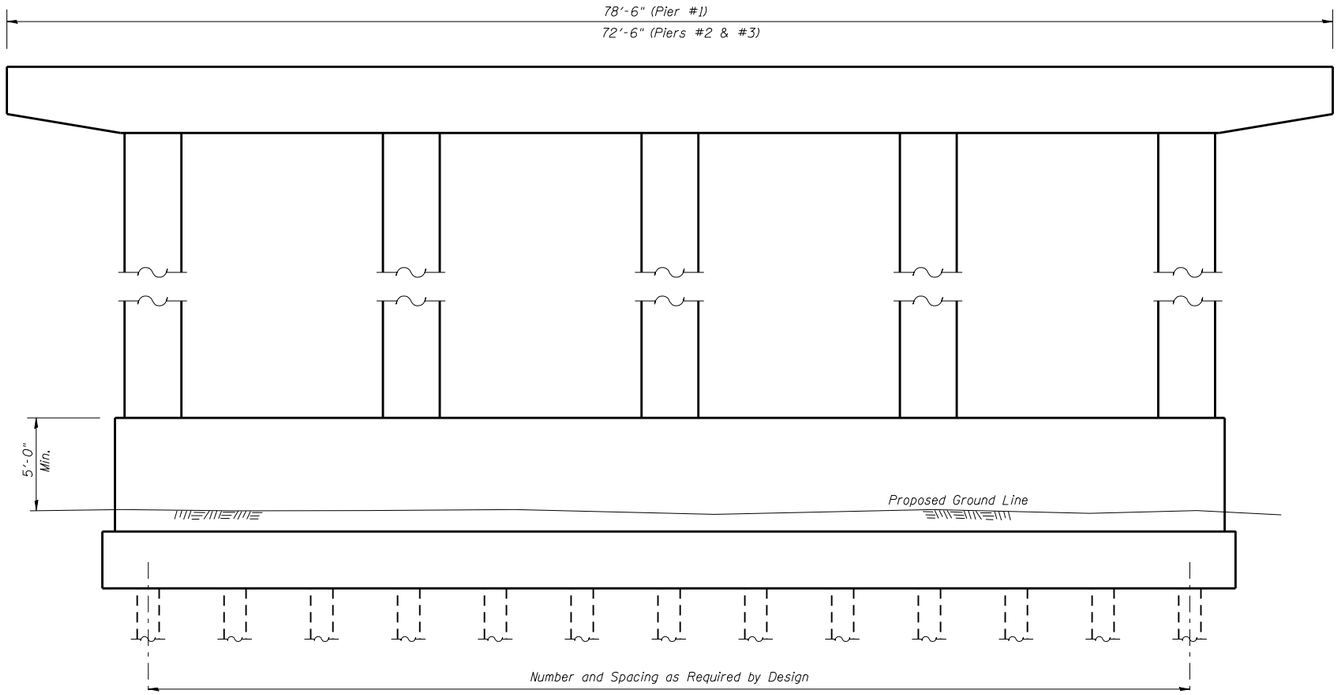
GENERAL PLAN AND ELEVATION
FAU 7448 (BRUSH COLLEGE ROAD)
OVER FARIES PARKWAY
SECTION 09-00933-00-BR
MACON COUNTY
STATION 61+27.39
STRUCTURE NO. 058-9202

URS	USER NAME =	DESIGNED - DCS/BMZ	REVISED
		CHECKED - KWB	REVISED
	PLOT SCALE =	DRAWN - DCS	REVISED
	PLOT DATE =	CHECKED - KWB	REVISED

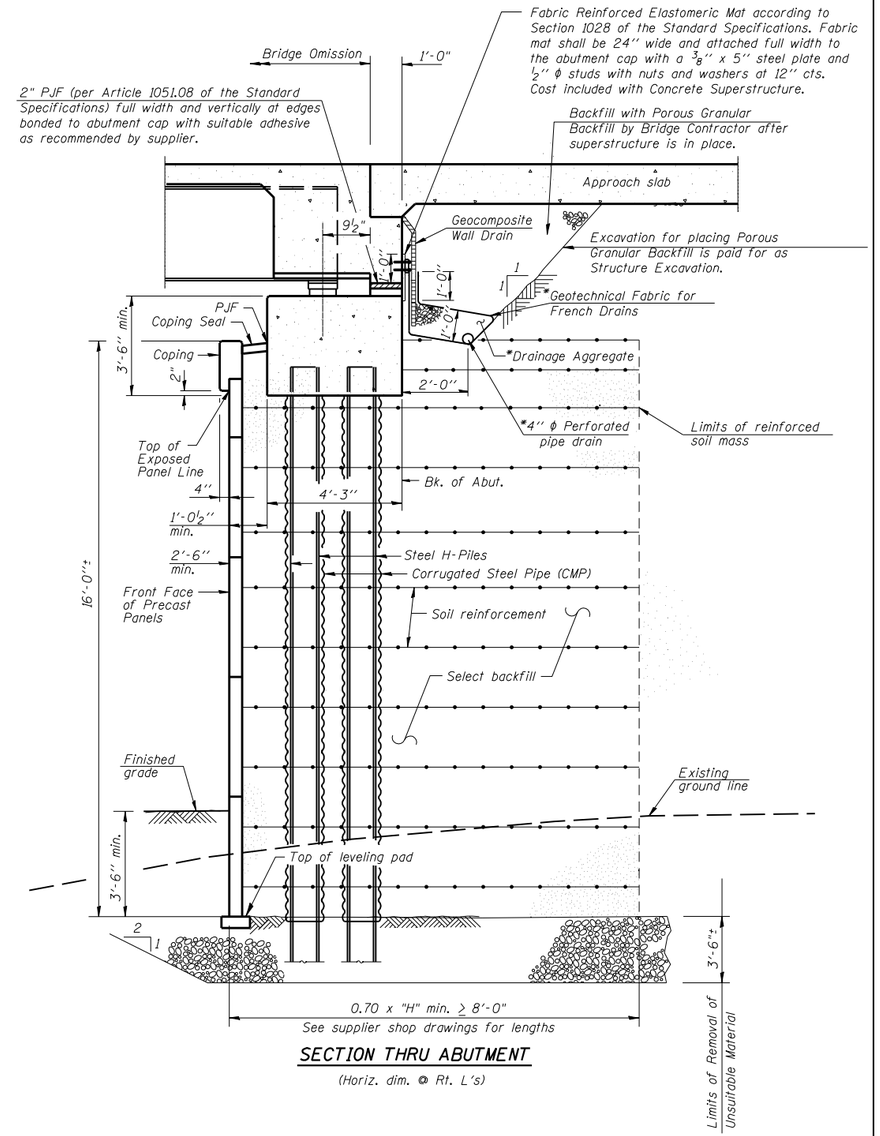
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON	1	3
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



PIER SKETCH



SECTION THRU ABUTMENT

(Horiz. dim. @ Rt. L's)

DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
OVER FARIES PARKWAY
SECTION 09-00933-00-BR
MACON COUNTY
STATION 62+61.39
STRUCTURE NO. 058-9202

URS	USER NAME =	DESIGNED - DCS/BMZ	REVISED
		CHECKED - KWB	REVISED
	PLOT SCALE =	DRAWN - DCS	REVISED
	PLOT DATE =	CHECKED - KWB	REVISED

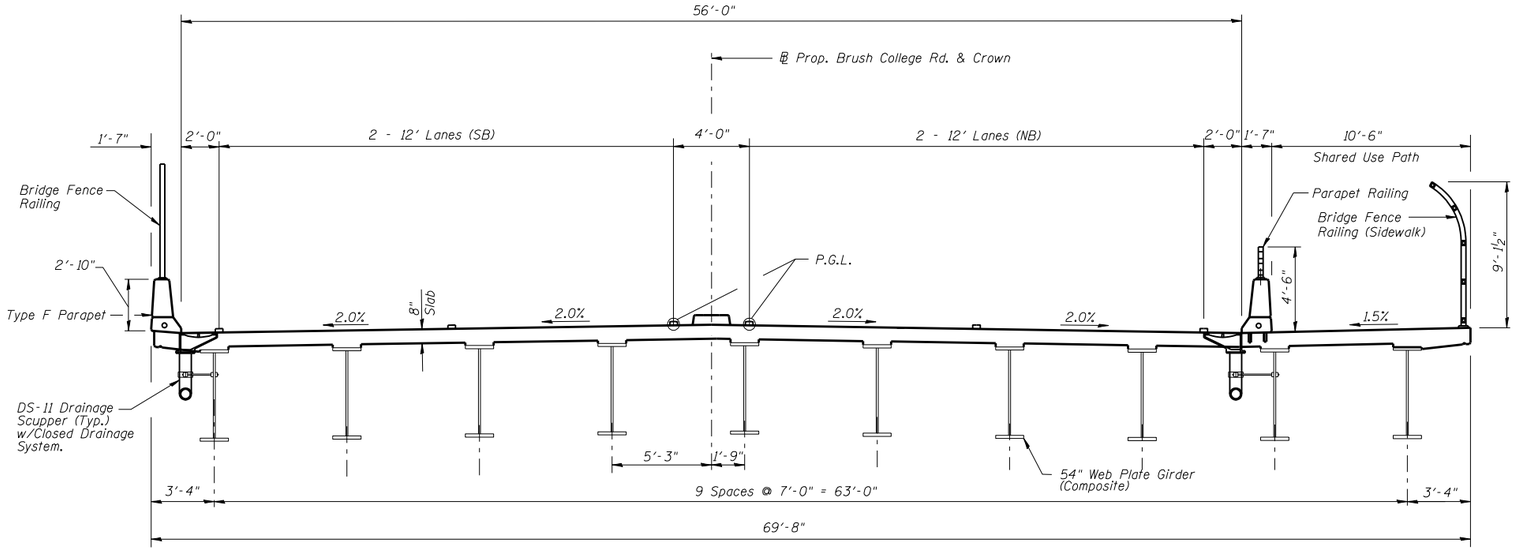
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON	2	3

CONTRACT NO.

ILLINOIS FED. AID PROJECT

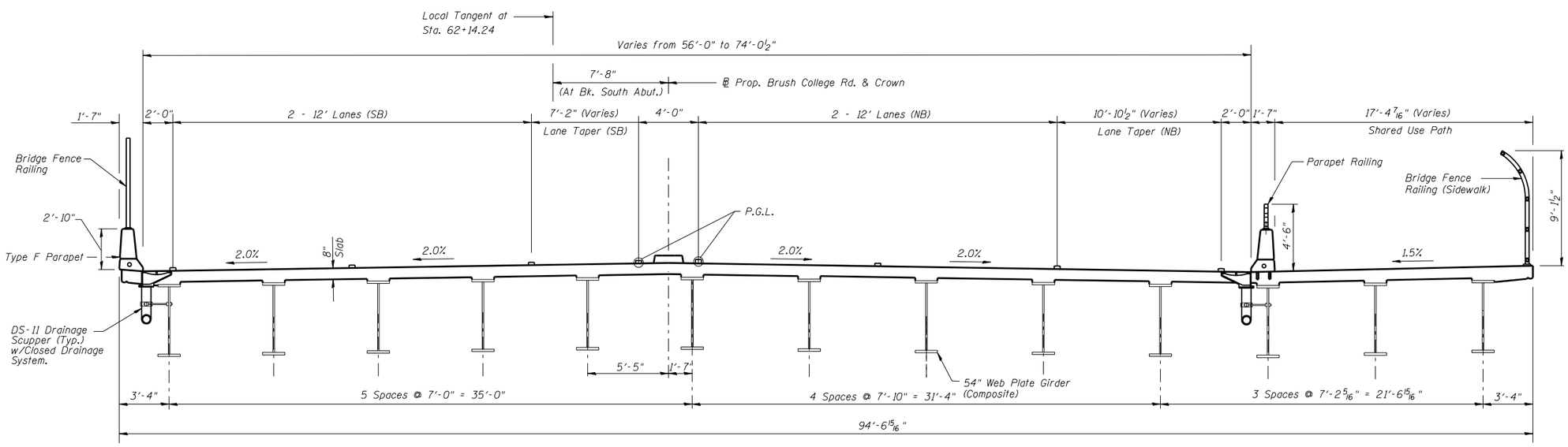


PROPOSED CROSS-SECTION

(Sta. 62+32.67 to Sta. 65+04.18)

Notes:

1. No free fall deck drains will be permitted in the spans over the tracks or within 10' of cross arms of a railroad pole line.
2. Provide openings at the base of the east parapet for drainage.



PROPOSED CROSS-SECTION

(Sta. 60+18.60 to Sta. 62+32.67)

DETAILS
FAU 7448 (BRUSH COLLEGE ROAD) OVER FARIES PARKWAY
SECTION 09-00933-00-BR
MACON COUNTY
STATION 62+61.39
STRUCTURE NO. 058-9202

URS	USER NAME =	DESIGNED - DCS/BMZ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 3 OF 3 SHEETS
		CHECKED - KWB	REVISED		
	PLOT SCALE =	DRAWN - DCS	REVISED		
	PLOT DATE =	CHECKED - KWB	REVISED		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON	3	3
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways / Bureau of Bridges and Structures
2300 South Dirksen Parkway, Springfield, Illinois 62764

July 10, 2014

City of Decatur
Section 09-00933-00-BR

SN 058-W001 – W006
(BBS Tracking Only)

F.A.U. 7448 (Brush College Road) & F.A.U. 7369 (Faries Parkway)

Honorable Mike McElroy
Mayor
City of Decatur
1 Gary K. Anderson Plaza
Decatur, Illinois 62523

Dear Mayor McElroy:

The preliminary retaining wall designs for the above-designated project are satisfactory based on your consultant's disposition, dated May 7, 2014, and the revised Type, Size, & Location drawings, which adequately address our review comments. The preliminary retaining wall designs are hereby approved.

The final structural plans and specifications for this project may be accepted by the District based on the Structural Engineer's seal, certification and signature per BLRS Manual Section 11-7.03.1 or Section 23-7.02.1 for Federal-Aid projects. If you have any questions, contact Matt Humke at 217/782-5929 or matt.humke@illinois.gov.

One copy of the approved drawings is being returned to you and to the consultant, URS, Inc.

Sincerely,

D. Carl Puzey
Acting Engineer of Bridges and Structures

Timothy A. Armbrecht

By: Timothy A. Armbrecht
Acting Engineer of Structural Services

MDH/kkt058W001-W006-20140710
cc: Roger L. Driskell, District 7 / Attn: Maureen E. Kastl
URS, Inc. / Attn: Keith Benting

Benchmark:

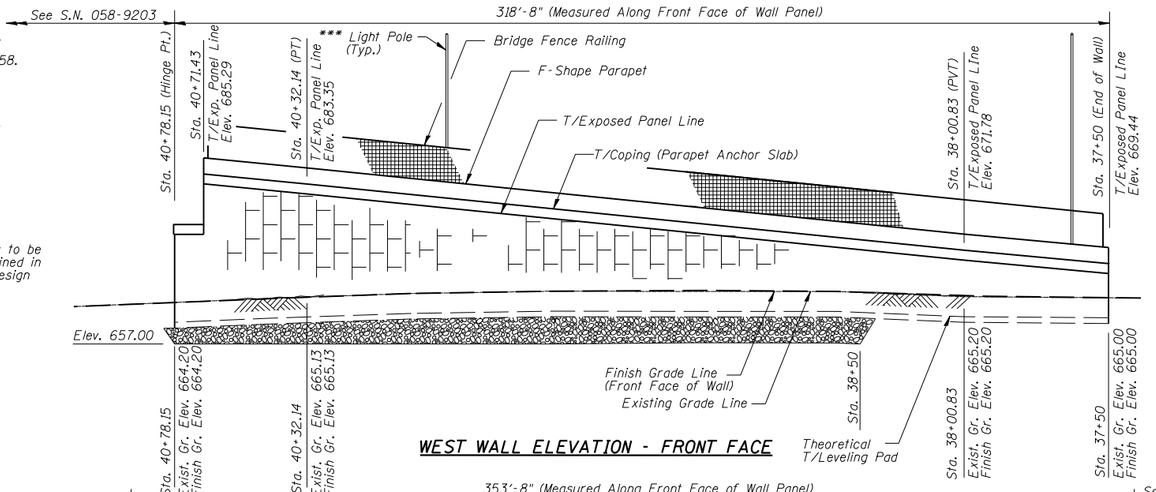
"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

Existing Structure:

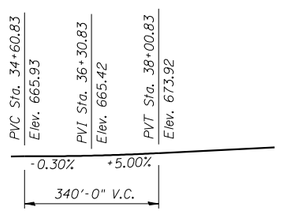
None

Traffic to be maintained utilizing staged construction

*** Details to be determined in final design

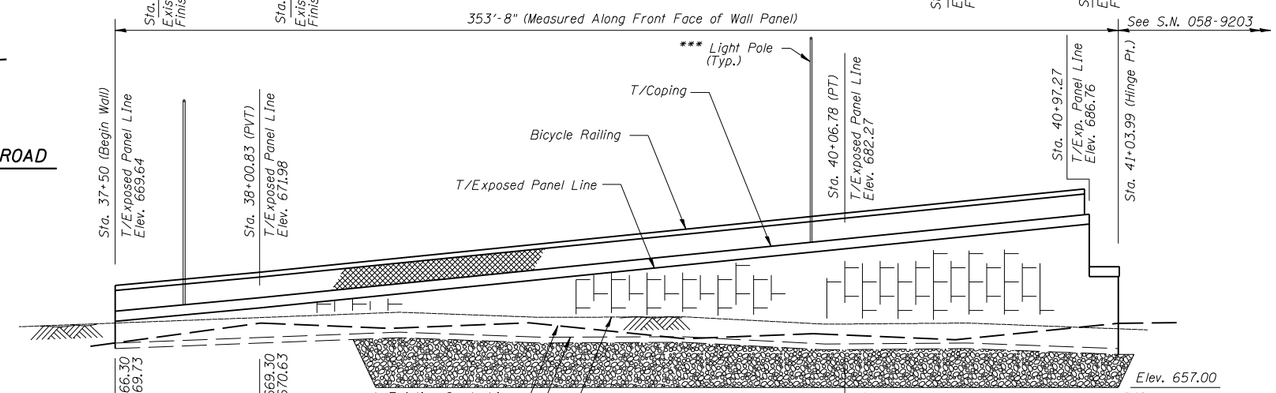


WEST WALL ELEVATION - FRONT FACE

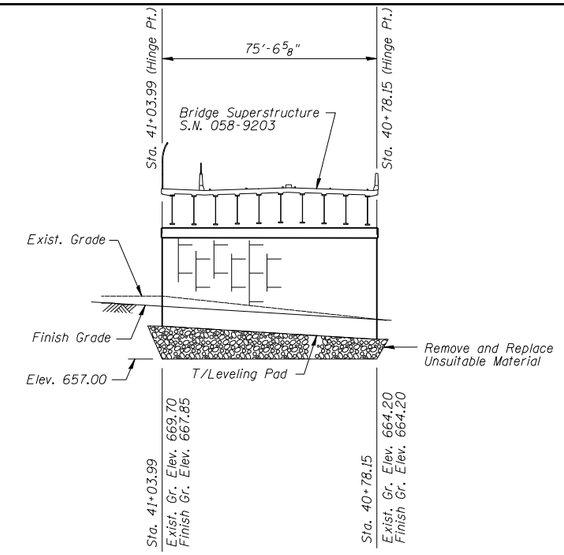


PROFILE GRADE - BRUSH COLLEGE ROAD

(Edge of Median)



EAST WALL ELEVATION - FRONT FACE



ABUTMENT ELEVATION - FRONT FACE

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
Directional Split: 50:50
ADTT: 7.4%
DHV: 1900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST UNITS

f'_c = 4,500 psi (Precast Panels)

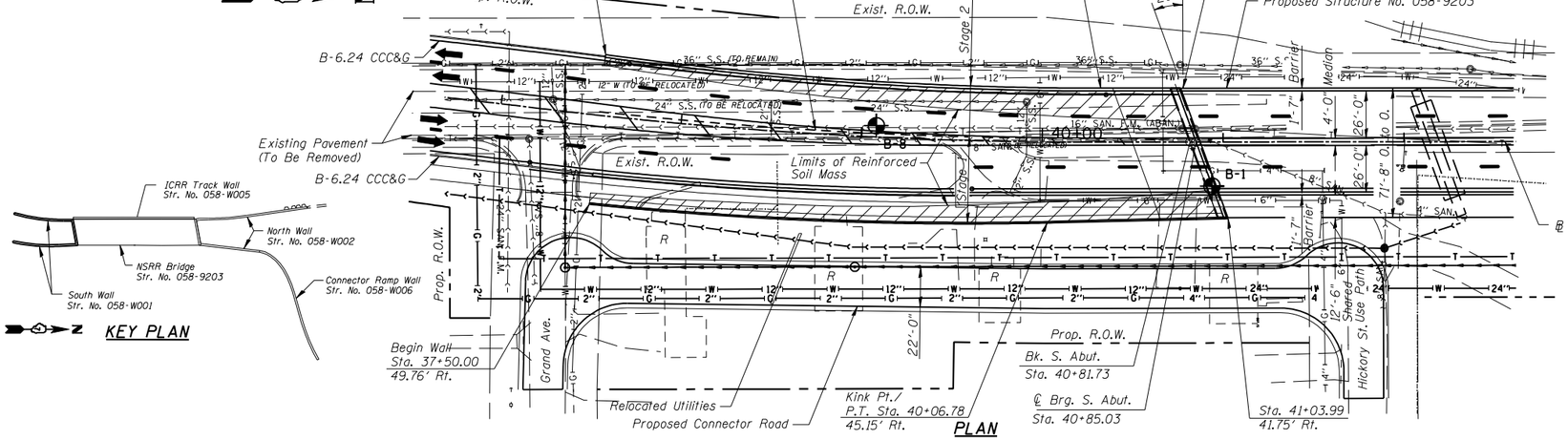
Notes:

Wall location stations and offsets are referenced to the front face of wall panels.

All buildings shown are residences labeled "R" and are to be removed.

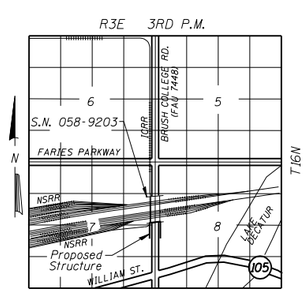
PROP. CURVE BRUSH 4
BRUSH COLLEGE RD.

PI STA. = 38+76.53
Δ = 7° 03' 07" (LT)
D = 2° 17' 31"
R = 2,500.00'
T = 154.05'
L = 307.70'
E = 4.74'
S.E. RUN = N/A
P.C. STA. = 37+22.49
P.T. STA. = 40+30.19



PLAN

KEY PLAN

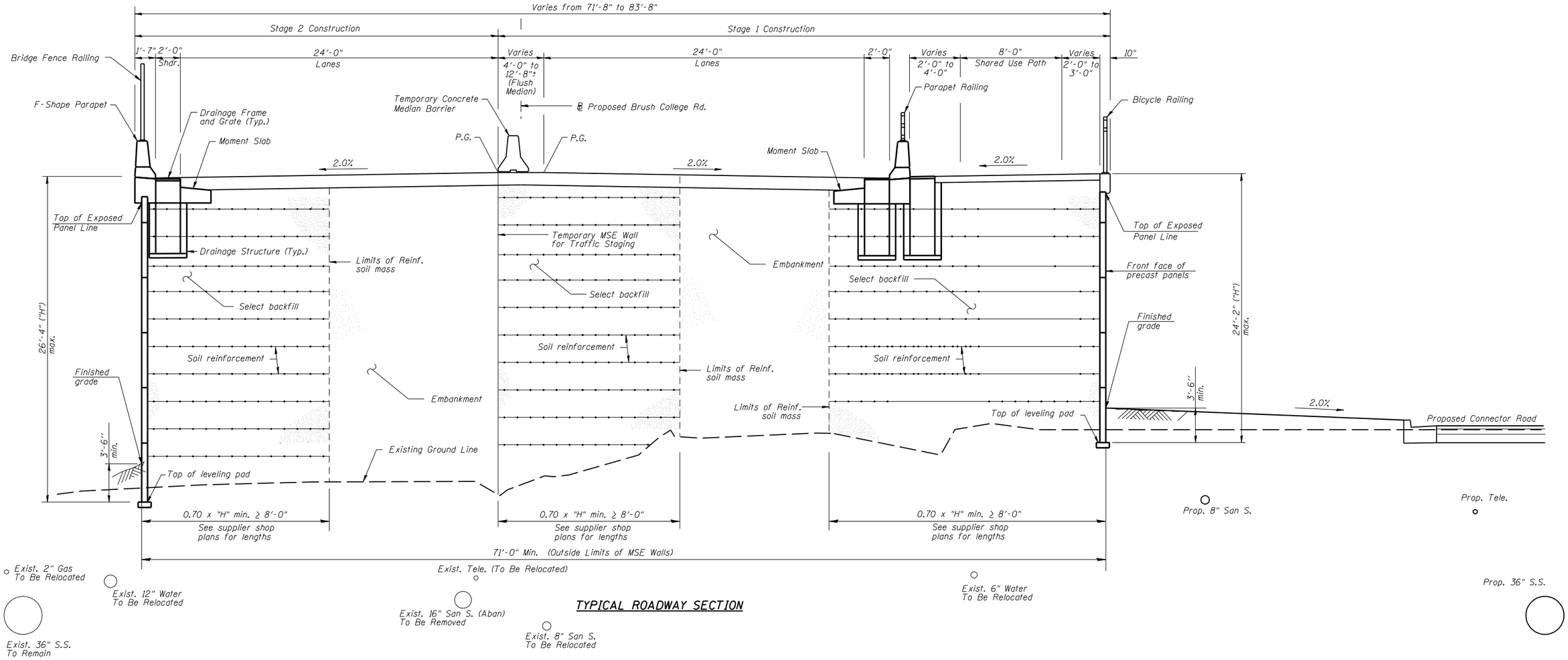


LOCATION SKETCH

GENERAL PLAN
FAU 7448 (BRUSH COLLEGE ROAD)
MACON COUNTY
STA. 37+50.00 RT TO STA. 37+50.00 LT.
STRUCTURE NO. 058-W001

URS	USER NAME =	DESIGNED - DCS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 2 SHEETS
		CHECKED - KWB	REVISED		
	PLOT SCALE =	DRAWN - DCS	REVISED		
	PLOT DATE =	CHECKED - KWB	REVISED		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON		
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



TYPICAL ROADWAY SECTION

TYPICAL SECTIONS AND DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
MACON COUNTY
STA. 37+50.00 RT TO STA. 37+50.00 LT.
STRUCTURE NO. 058-W001

URS	USER NAME =	DESIGNED - DCS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - KWB	REVISED			7448	09-00933-00-BR	MACON		
	PLOT SCALE =	DRAWN - DCS	REVISED					CONTRACT NO.		
	PLOT DATE =	CHECKED - KWB	REVISED		SHEET NO. 2 OF 2 SHEETS		ILLINOIS	FED. AID PROJECT		

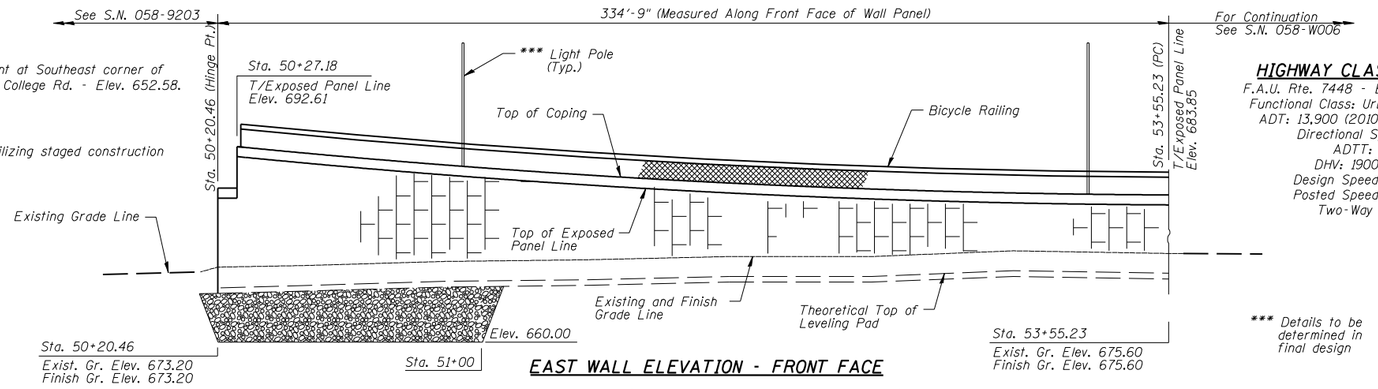
Benchmark:

"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

Existing Structure:

None

Traffic to be maintained utilizing staged construction



EAST WALL ELEVATION - FRONT FACE

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
Directional Split: 50:50
ADTT: 7.4%
DHV: 1900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

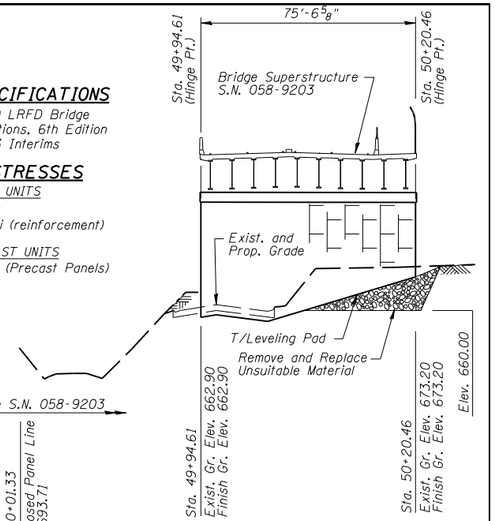
DESIGN STRESSES

FIELD UNITS

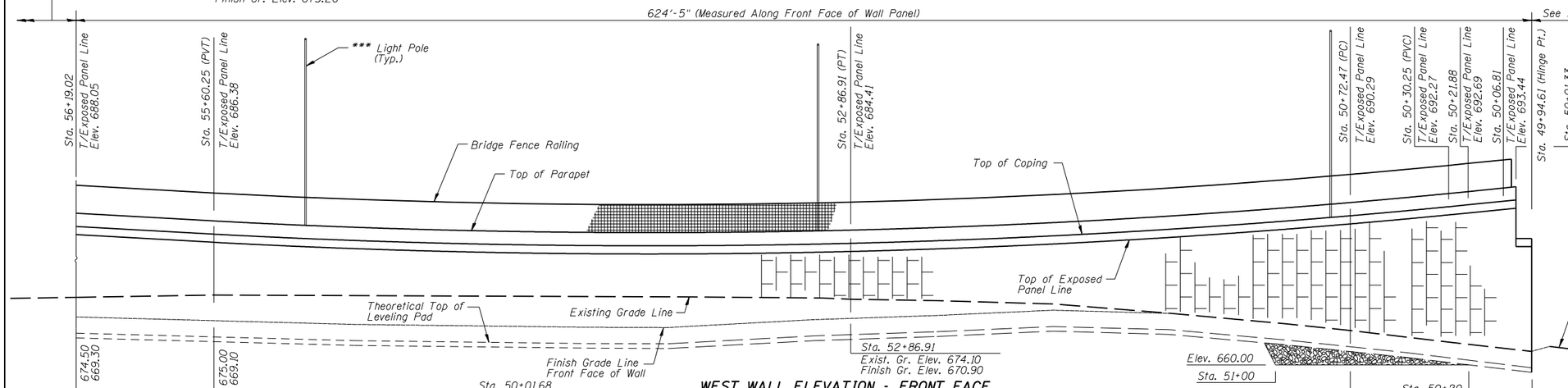
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST UNITS

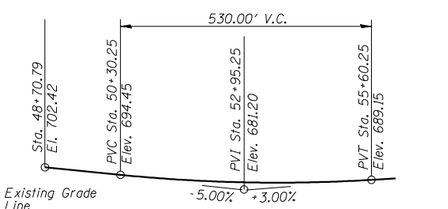
f'_c = 4,500 psi (Precast Panels)



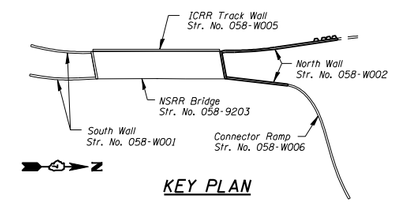
ABUTMENT ELEVATION - FRONT FACE



WEST WALL ELEVATION - FRONT FACE



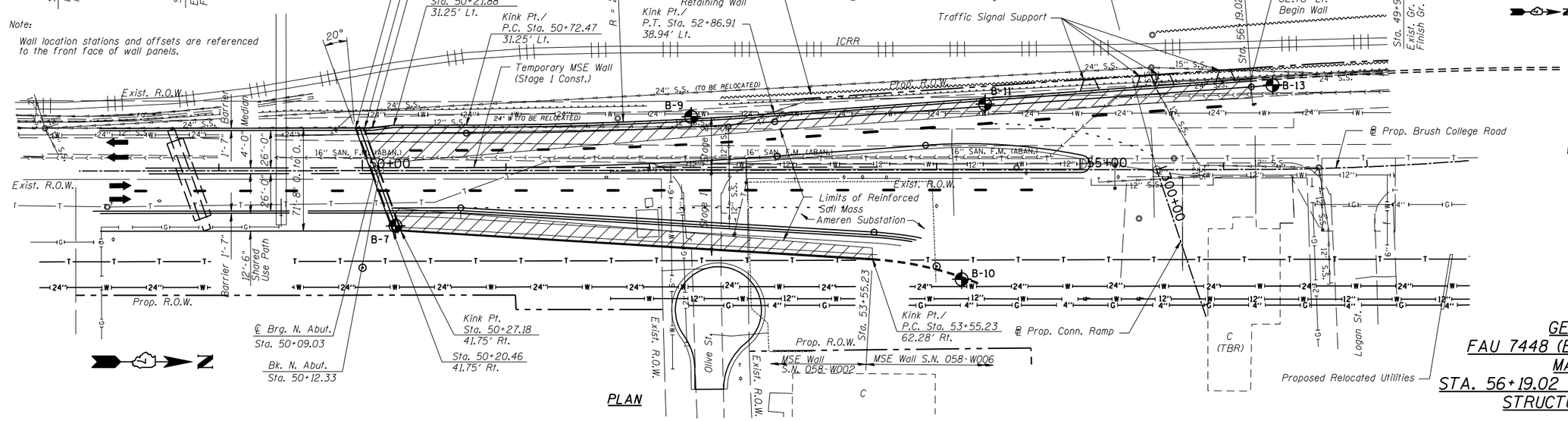
PROFILE BRUSH COLLEGE ROAD



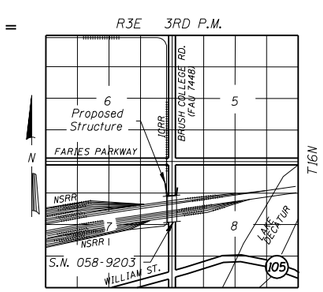
KEY PLAN

Note:

Wall location stations and offsets are referenced to the front face of wall panels.



PLAN



LOCATION SKETCH

GENERAL PLAN
FAU 7448 (BRUSH COLLEGE ROAD)
MACON COUNTY
STA. 56+19.02 LT TO STA. 53+55.23 RT
STRUCTURE NO. 058-W002

URS

USER NAME =	DESIGNED - DCS	REVISED
	CHECKED - KWB	REVISED
PLOT SCALE =	DRAWN - DCS	REVISED
PLOT DATE =	CHECKED - KWB	REVISED

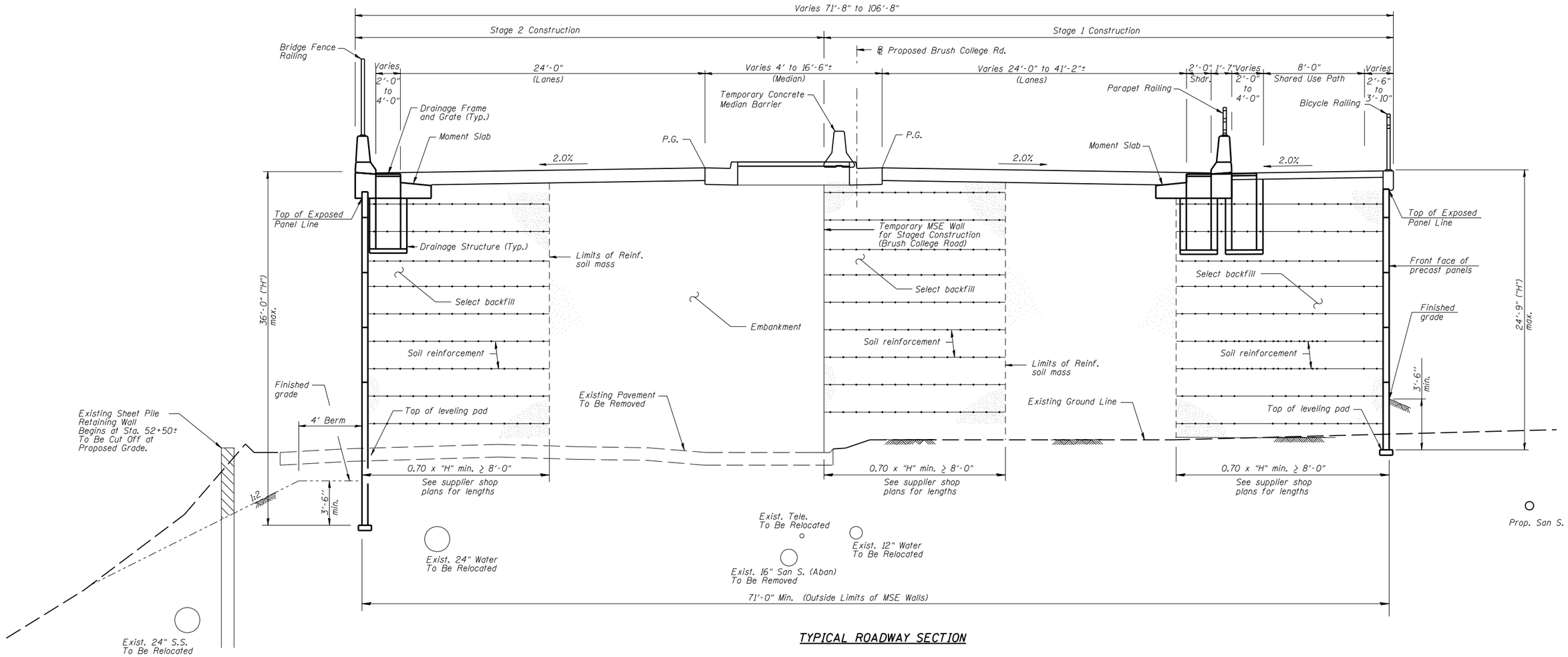
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON		

CONTRACT NO.

ILLINOIS FED. AID PROJECT



TYPICAL ROADWAY SECTION

SECTIONS AND DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
MACON COUNTY
STA. 56+19.02 LT TO STA. 53+55.23 RT
STRUCTURE NO. 058-W002

URS	USER NAME =	DESIGNED - DCS	REVISED
		CHECKED - KWB	REVISED
	PLOT SCALE =	DRAWN - DCS	REVISED
	PLOT DATE =	CHECKED - KWB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON		

CONTRACT NO.

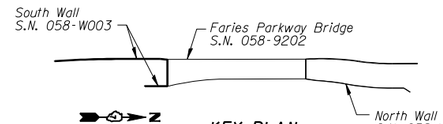
ILLINOIS FED. AID PROJECT

Benchmark:

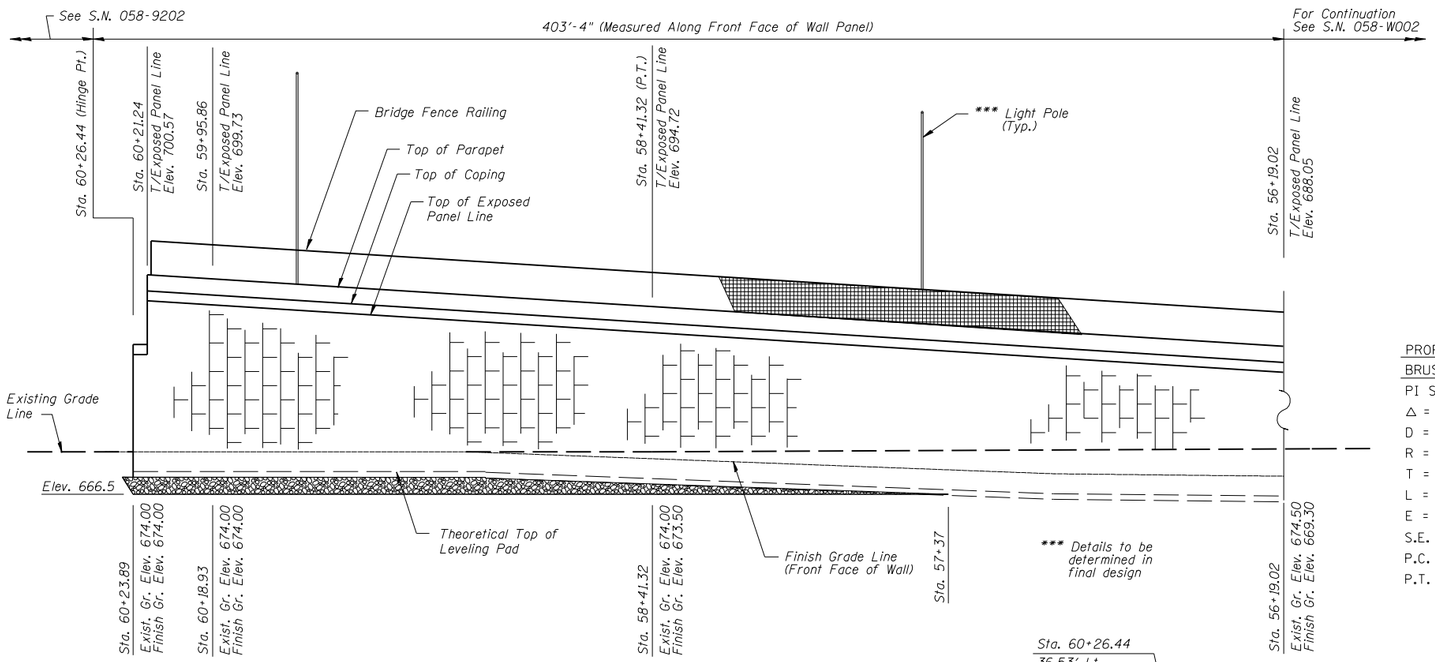
"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

Existing Structure:

None



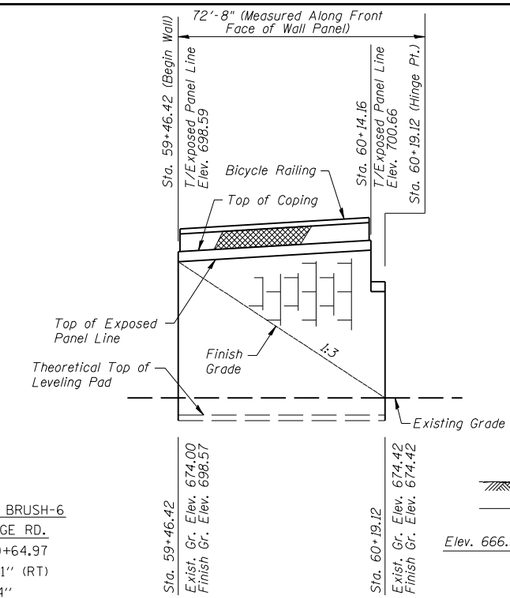
KEY PLAN



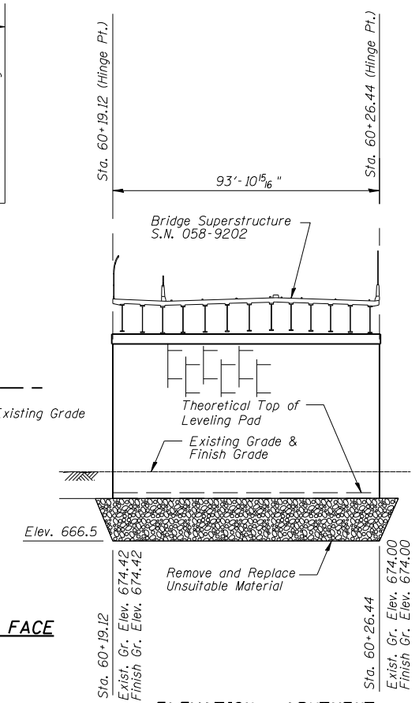
WEST WALL ELEVATION - FRONT FACE

PROP. CURVE BRUSH-6
BRUSH COLLEGE RD.

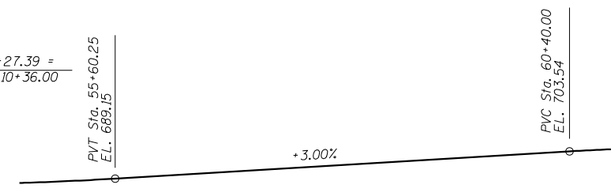
PI STA. = 60+64.97
Δ = 6° 50' 41'' (RT)
D = 2° 17' 24''
R = 2,502.00'
T = 149.63'
L = 298.90'
E = 4.47'
S.E. RUN = -----
P.C. STA. = 59+15.34
P.T. STA. = 62+14.24



EAST WALL ELEVATION - FRONT FACE



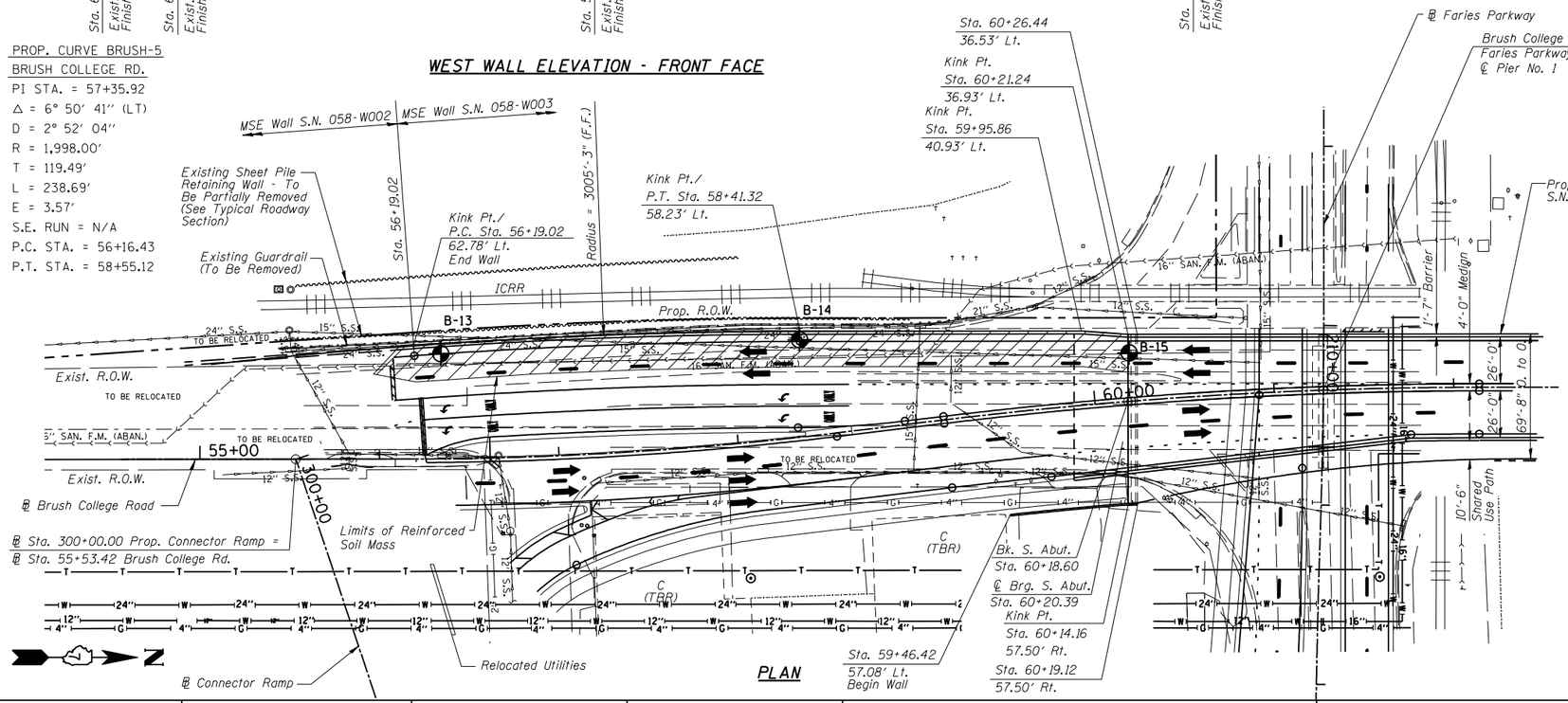
ELEVATION - ABUTMENT
FRONT FACE



PROFILE - BRUSH COLLEGE ROAD

PROP. CURVE BRUSH-5
BRUSH COLLEGE RD.

PI STA. = 57+35.92
Δ = 6° 50' 41'' (LT)
D = 2° 52' 04''
R = 1,998.00'
T = 119.49'
L = 238.69'
E = 3.57'
S.E. RUN = N/A
P.C. STA. = 56+16.43
P.T. STA. = 58+55.12



PLAN

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
Directional Split: 50:50
ADTT: 7.4%
DHV: 1900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

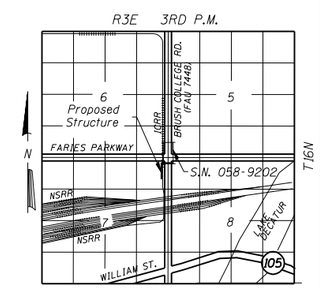
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST UNITS

f'_c = 4,500 psi (Precast Panels)



LOCATION SKETCH

GENERAL PLAN
FAU 7448 (BRUSH COLLEGE ROAD)
OVER FARIES PARKWAY
MACON COUNTY
STA. 59+40.92 RT TO STA 56+19.02 LT.
STRUCTURE NO. 058-W003

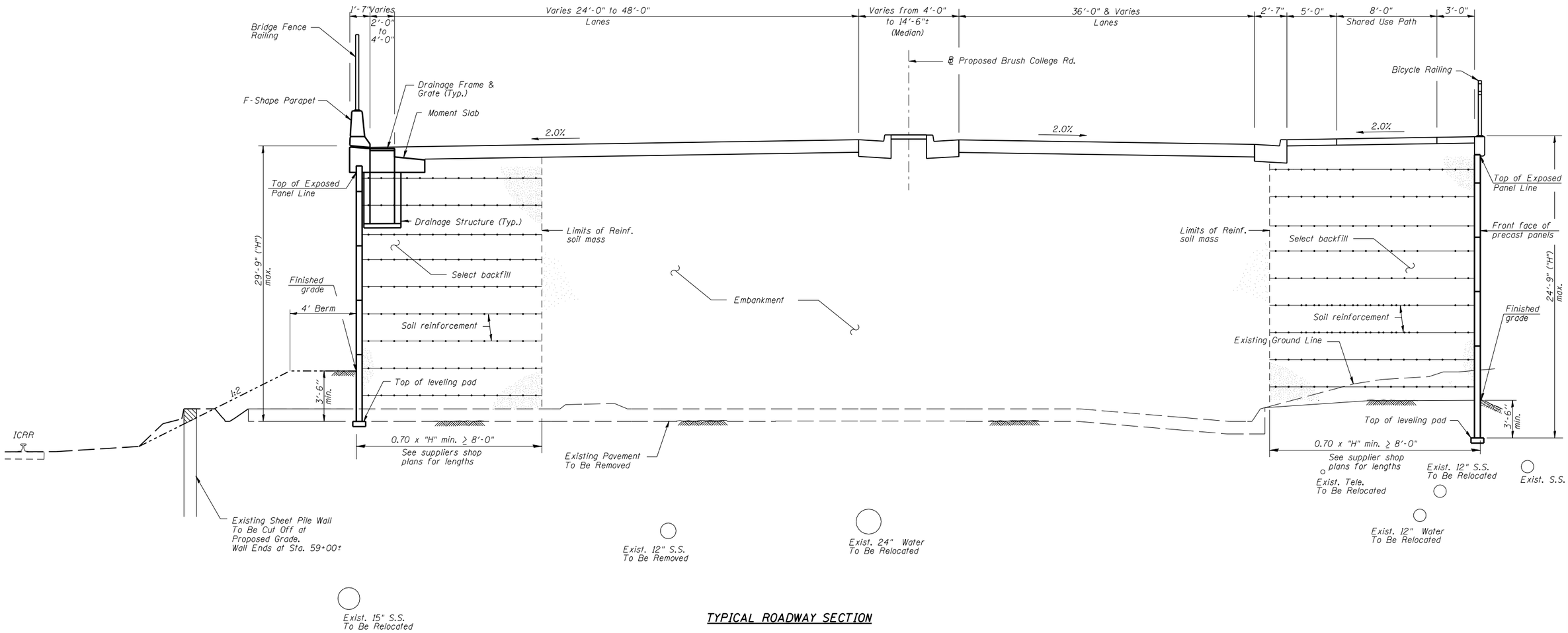
URS

USER NAME =	DESIGNED - DCS	REVISED	
	CHECKED - KWB	REVISED	
PLOT SCALE =	DRAWN - DCS	REVISED	
PLOT DATE =	CHECKED - KWB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON		
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



TYPICAL ROADWAY SECTION

TYPICAL SECTIONS AND DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
OVER FARIES PARKWAY
MACON COUNTY
STA. 59+40.92 RT TO STA 56+19.02 LT.
STRUCTURE NO. 058-W003

URS	USER NAME =	DESIGNED - DCS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		CHECKED - KWB	REVISED			7448	09-00933-00-BR	MACON	
	PLOT SCALE =	DRAWN - DCS	REVISED					CONTRACT NO.	
	PLOT DATE =	CHECKED - KWB	REVISED		SHEET NO. 2 OF 2 SHEETS		ILLINOIS	FED. AID PROJECT	

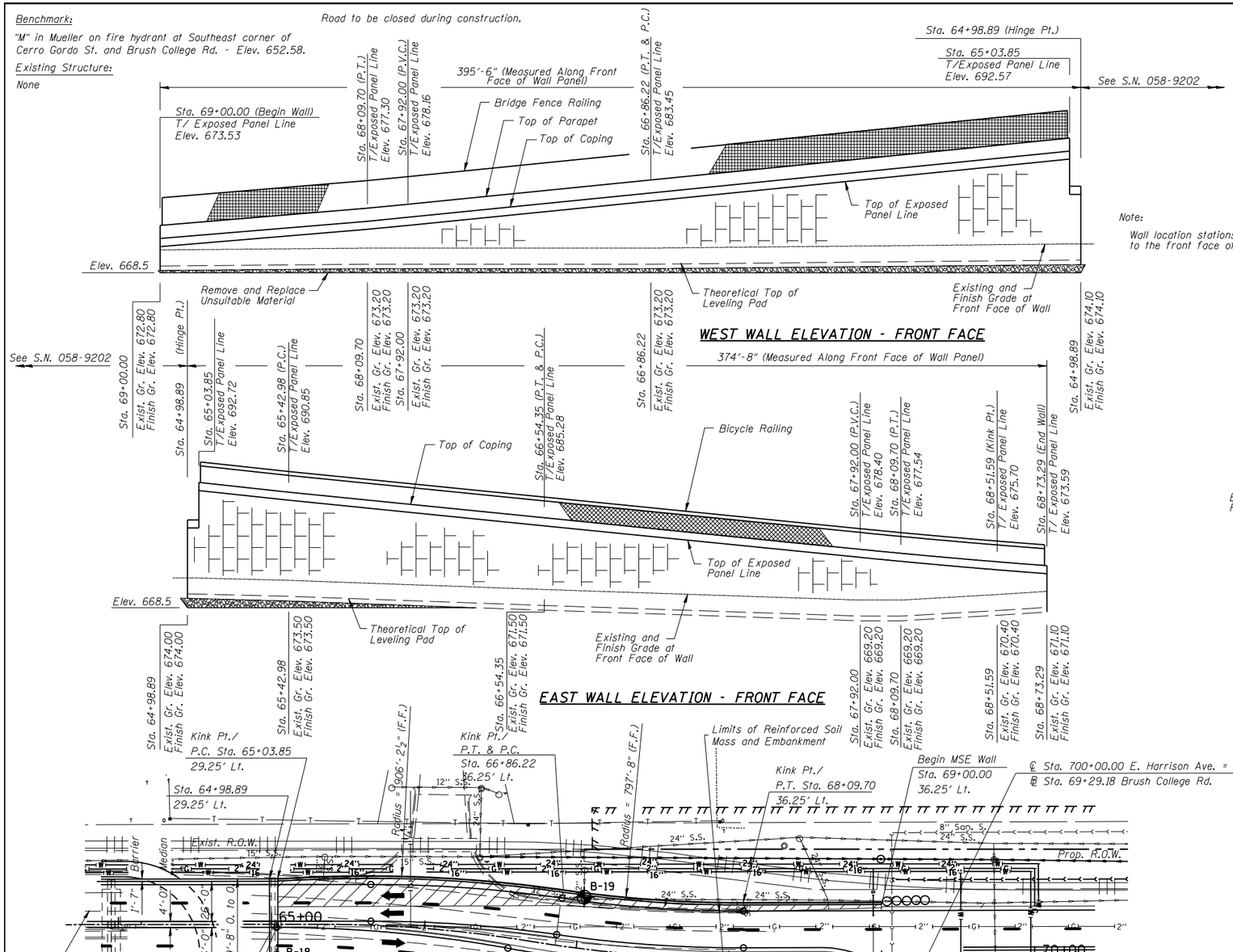
Benchmark:

"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

Existing Structure:

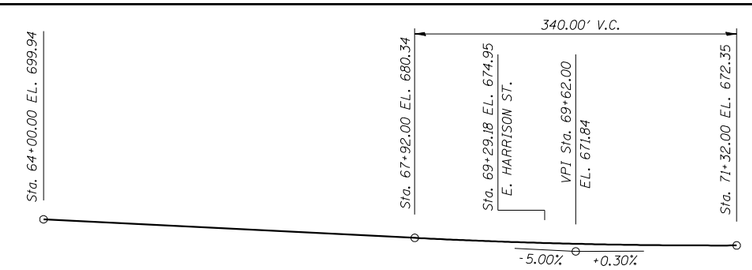
None

Road to be closed during construction.



WEST WALL ELEVATION - FRONT FACE

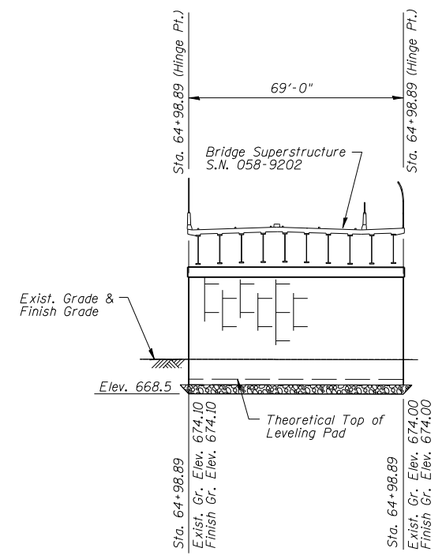
EAST WALL ELEVATION - FRONT FACE



PROFILE BRUSH COLLEGE ROAD

Note:

Wall location stations and offsets are referenced to the front face of wall panels.



ABUTMENT ELEVATION - FRONT FACE

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
Directional Split: 50:50
ADTT: 7.4%
DHV: 1900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

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2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

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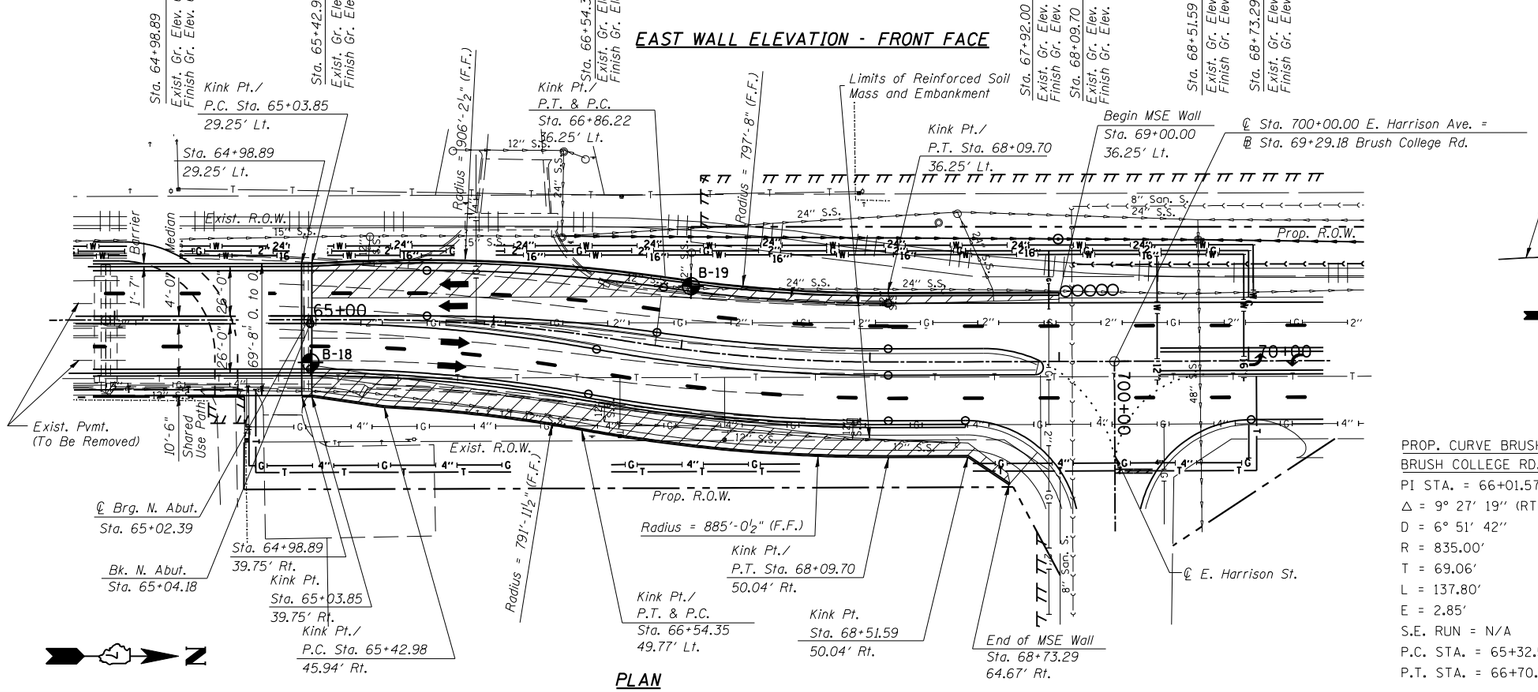
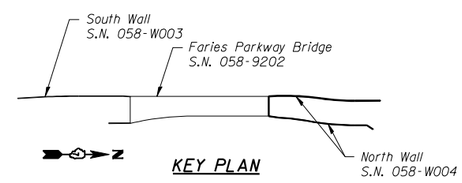
PRECAST UNITS

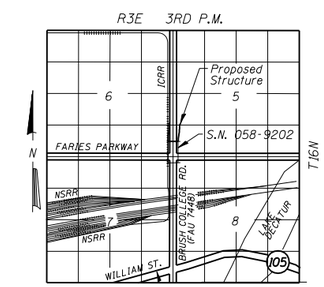
f'_c = 4,500 psi (Precast Panels)



PLAN



KEY PLAN



LOCATION SKETCH

PROP. CURVE BRUSH-7 BRUSH COLLEGE RD.	PROP. CURVE BRUSH-8 BRUSH COLLEGE RD.
PI STA. = 66+01.57	PI STA. = 67+40.17
Δ = 9° 27' 19" (RT)	Δ = 9° 33' 50" (LT)
D = 6° 51' 42"	D = 6° 51' 42"
R = 835.00'	R = 835.00'
T = 69.06'	T = 69.85'
L = 137.80'	L = 139.38'
E = 2.85'	E = 2.92'
S.E. RUN = N/A	S.E. RUN = N/A
P.C. STA. = 65+32.52	P.C. STA. = 66+70.32
P.T. STA. = 66+70.32	P.T. STA. = 68+09.70

GENERAL PLAN
FAU 7448 (BRUSH COLLEGE ROAD) OVER FARIES PARKWAY
MACON COUNTY
STA. 69+00.00 LT. TO STA. 68+73.29 RT.
STRUCTURE NO. 058-W004

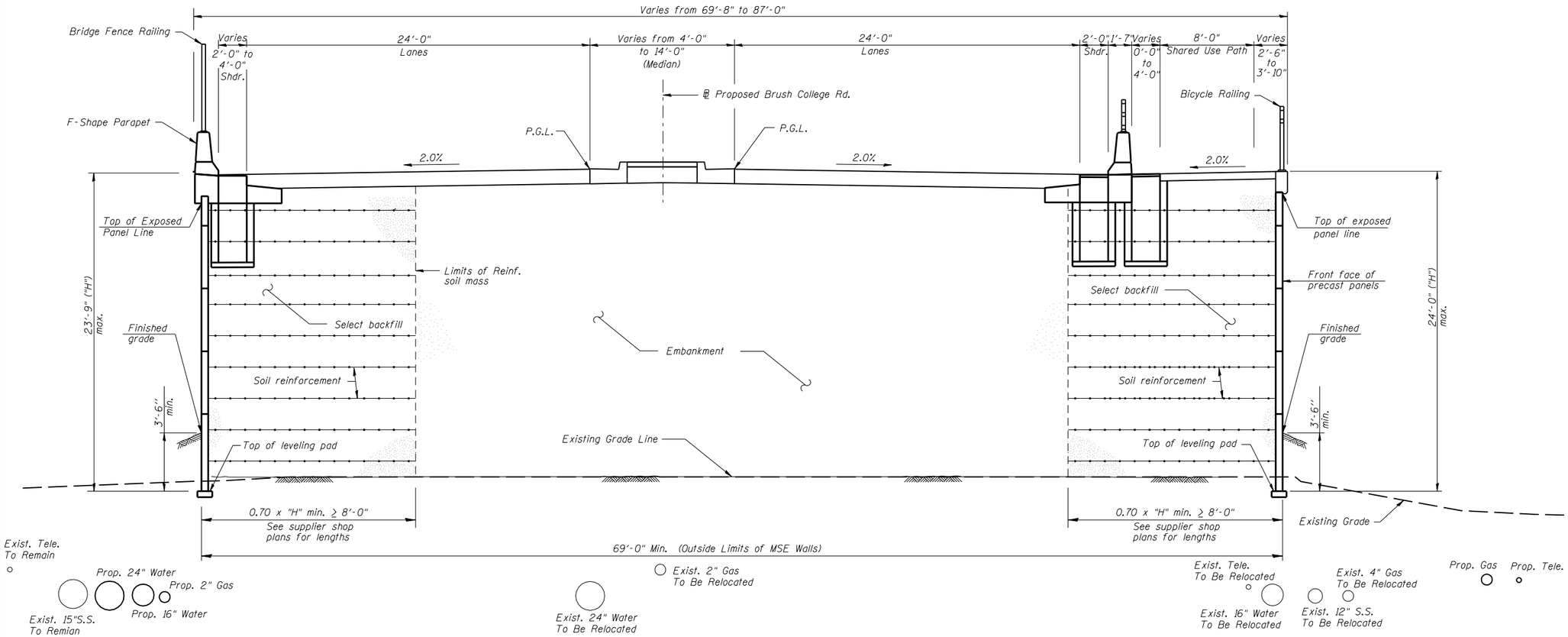
URS

USER NAME =	DESIGNED - DCS	REVISED
	CHECKED - KWB	REVISED
PLOT SCALE =	DRAWN - DCS	REVISED
PLOT DATE =	CHECKED - KWB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON		
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



TYPICAL ROADWAY SECTION

TYPICAL SECTIONS AND DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
OVER FARIES PARKWAY
MACON COUNTY
STA. 69+00.00 LT. TO STA. 68+73.29 RT.
STRUCTURE NO. 058-W004

URS	USER NAME =	DESIGNED - DCS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - KWB	REVISED			7448	09-00933-00-BR	MACON		
	PLOT SCALE =	DRAWN - DCS	REVISED					CONTRACT NO.		
	PLOT DATE =	CHECKED - KWB	REVISED		SHEET NO. 2 OF 2 SHEETS		ILLINOIS	FED. AID PROJECT		

Benchmark:

"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

Traffic to be maintained on Brush College Road during construction utilizing staged construction and Temporary MSE walls.

Existing subway structures S.N. 058-3013 & S.N. 058-3014 to remain. The sections of the subway carrying the roadway will be bulkheaded at each end and filled. The portion carrying the Illinois Central Railroad track is to remain in place.

Sta. 95+65.3	Sta. 96+16.9	Sta. 96+66.4	Sta. 97+19.2	Sta. 97+95.3	Sta. 98+61.5	Sta. 99+34.4	℄ N.S.R.R. W.B. Running Track Sta. 100+00	Sta. 100+34.5	Sta. 101+74.9	Sta. 102+25.3	Sta. 102+76.7	Sta. 103+90.1	Sta. 104+40.5
Elev. 654.66	Elev. 654.08	Elev. 653.57	Elev. 653.15	Elev. 652.66	Elev. 651.96	Elev. 651.25	Elev. 650.83	Elev. 650.61	Elev. 650.38	Elev. 651.41	Elev. 652.18	Elev. 652.58	Elev. 652.95

TOP OF RAIL - ICRR

(R.R. Stationing - Looking East)

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
Directional Split: 50:50
ADTT: 7.4%
DHV: 1900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

LOADING HL 93

Allow 50#/sq. ft. for future wearing surface.

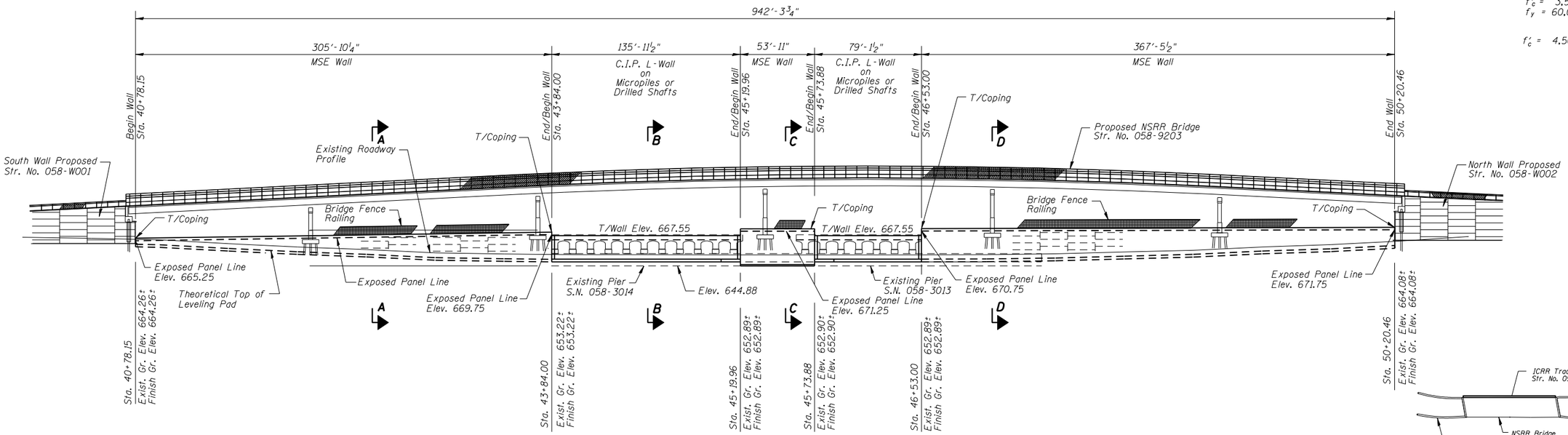
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST UNITS

f'_c = 4,500 psi (Precast Panels)

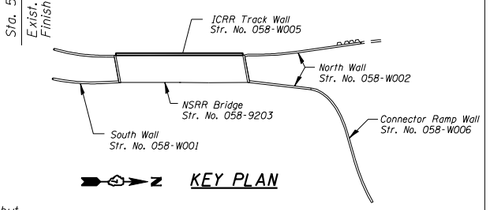


WALL ELEVATION - LOOKING WEST

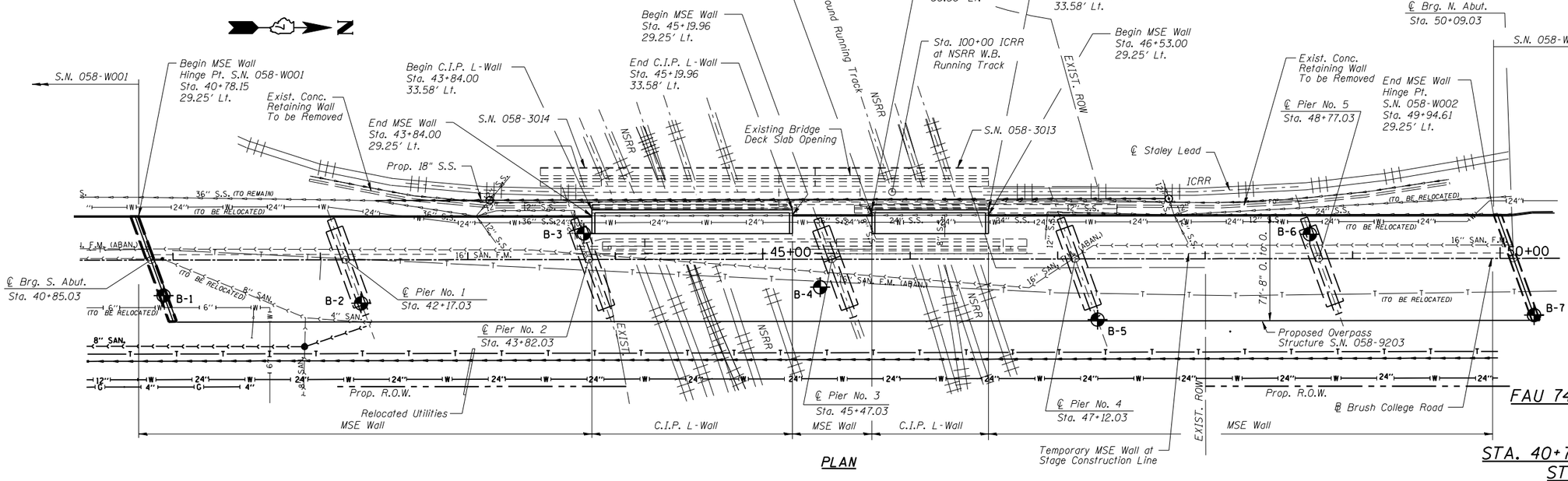
Notes:

Wall location stations and offsets are referenced to the front face of wall panel.

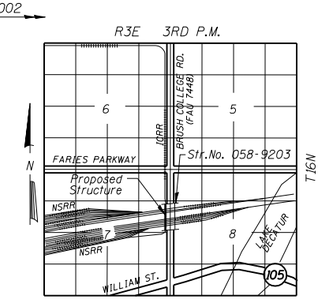
For Section Views - See Sheet 2.



KEY PLAN



PLAN



LOCATION SKETCH

GENERAL PLAN
FAU 7448 (BRUSH COLLEGE ROAD) OVER NSRR
MACON COUNTY
STA. 40+78.15 LT. TO STA. 49+94.61 LT.
STRUCTURE NO. 058-W005

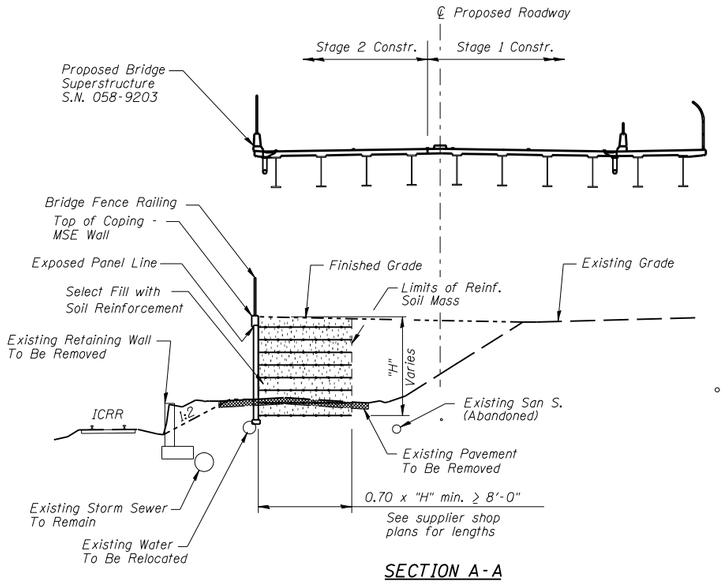
URS

USER NAME =	DESIGNED - DCS	REVISED
	CHECKED - KWB	REVISED
PLOT SCALE =	DRAWN - DCS	REVISED
PLOT DATE =	CHECKED - KWB	REVISED

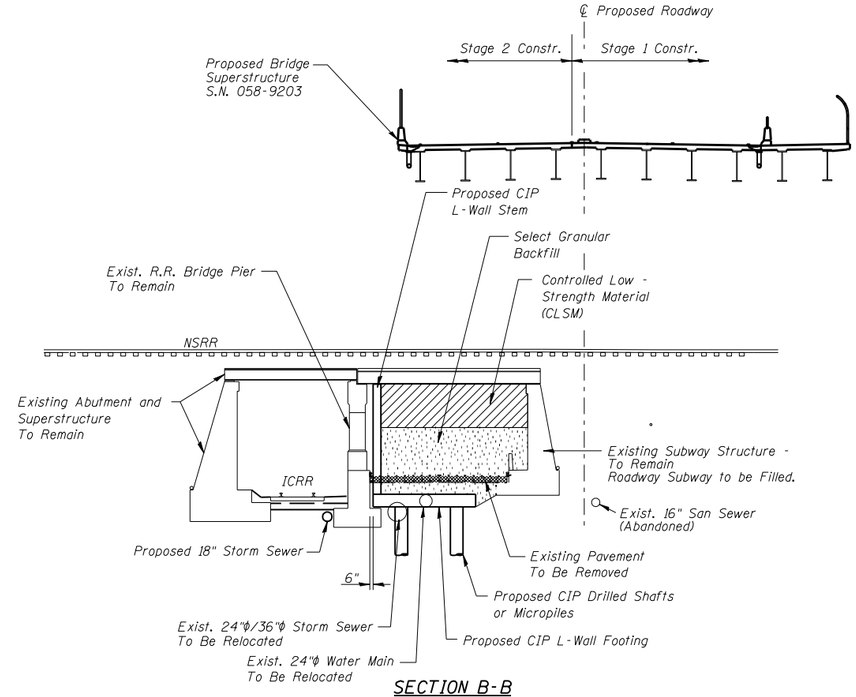
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

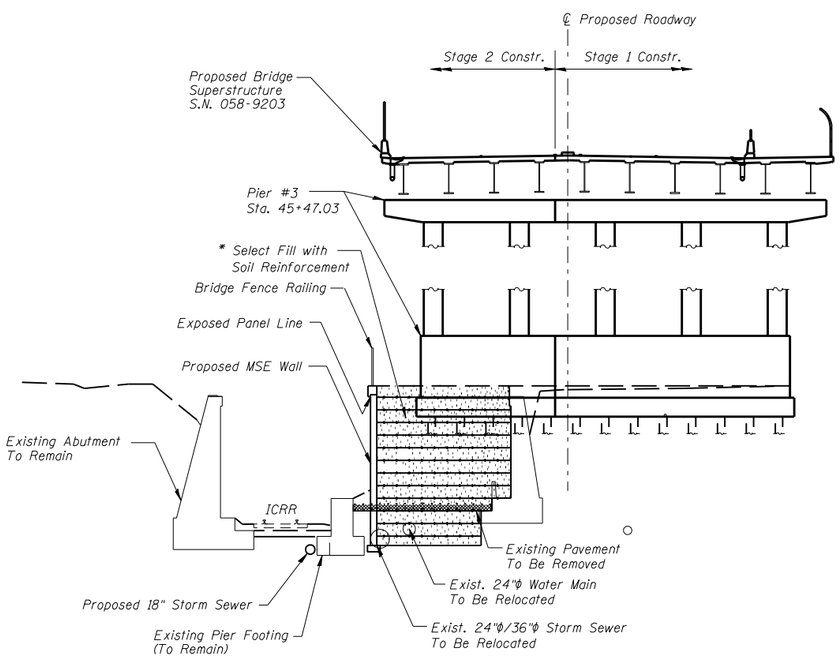
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON	2	1
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



SECTION A-A

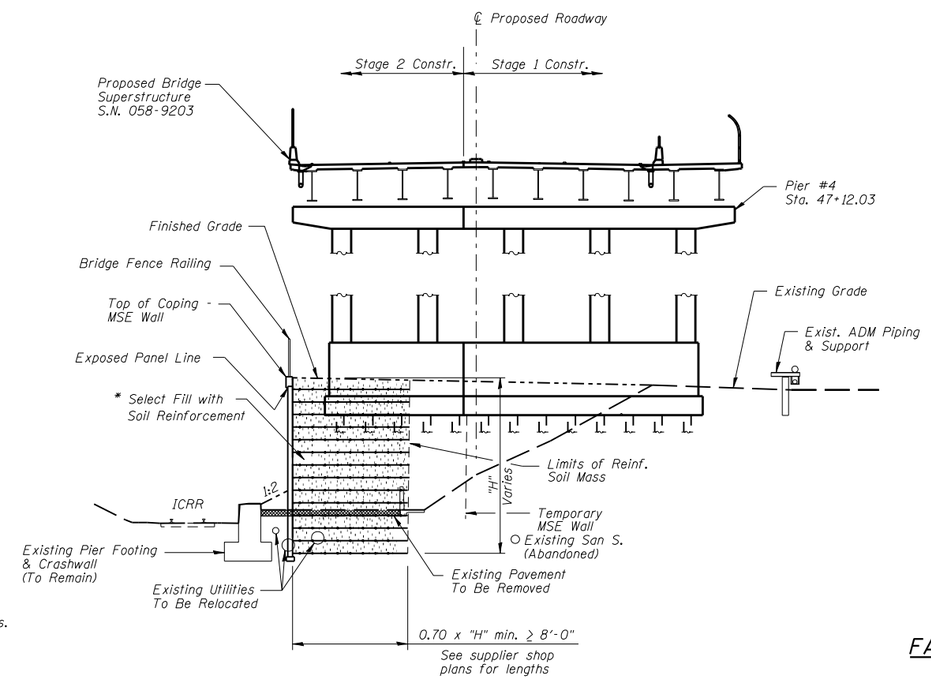


SECTION B-B



SECTION C-C

* Strips can be skewed around piles for new piers. If skew is excessive, connection to panel can be shifted so that skew can be reduced or angle irons can be used at the location of the obstruction to shift the strips.



SECTION D-D

SECTIONS AND DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
OVER NSRR
MACON COUNTY
STA. 40+78.15 LT. TO STA. 49+94.61 LT.
STRUCTURE NO. 058-W005

URS	USER NAME =	DESIGNED - DCS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 2 OF 2 SHEETS
		CHECKED - KWB	REVISED		
	PLOT SCALE =	DRAWN - DCS	REVISED		
	PLOT DATE =	CHECKED - KWB	REVISED		

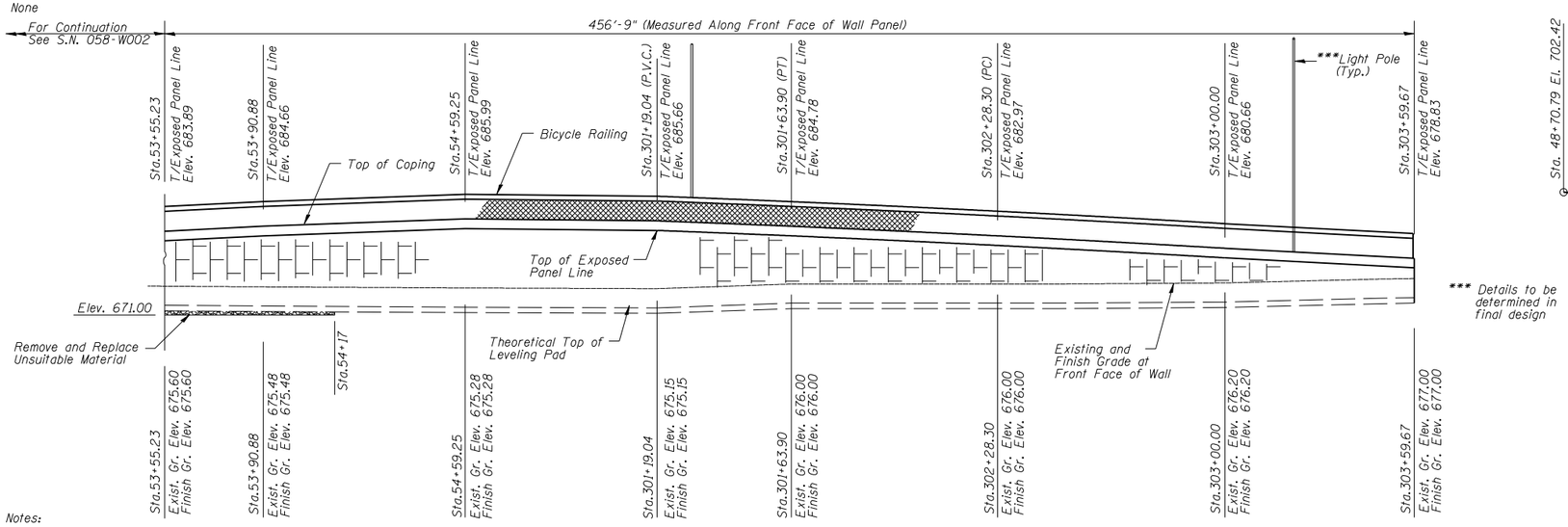
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON	2	2
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

Benchmark:

"M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. - Elev. 652.58.

Existing Structure:

None



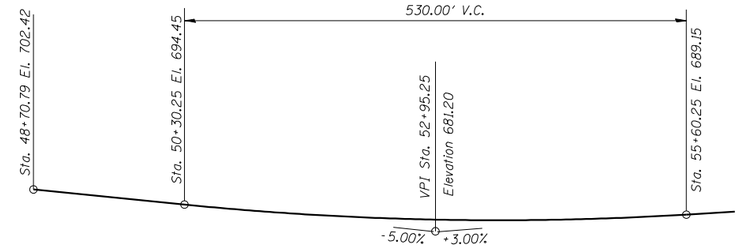
*** Details to be determined in final design

WALL ELEVATION - FRONT FACE

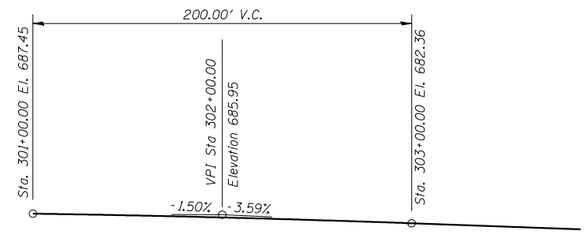
Notes:

Wall location stations and offsets are referenced to the front face of wall panels.

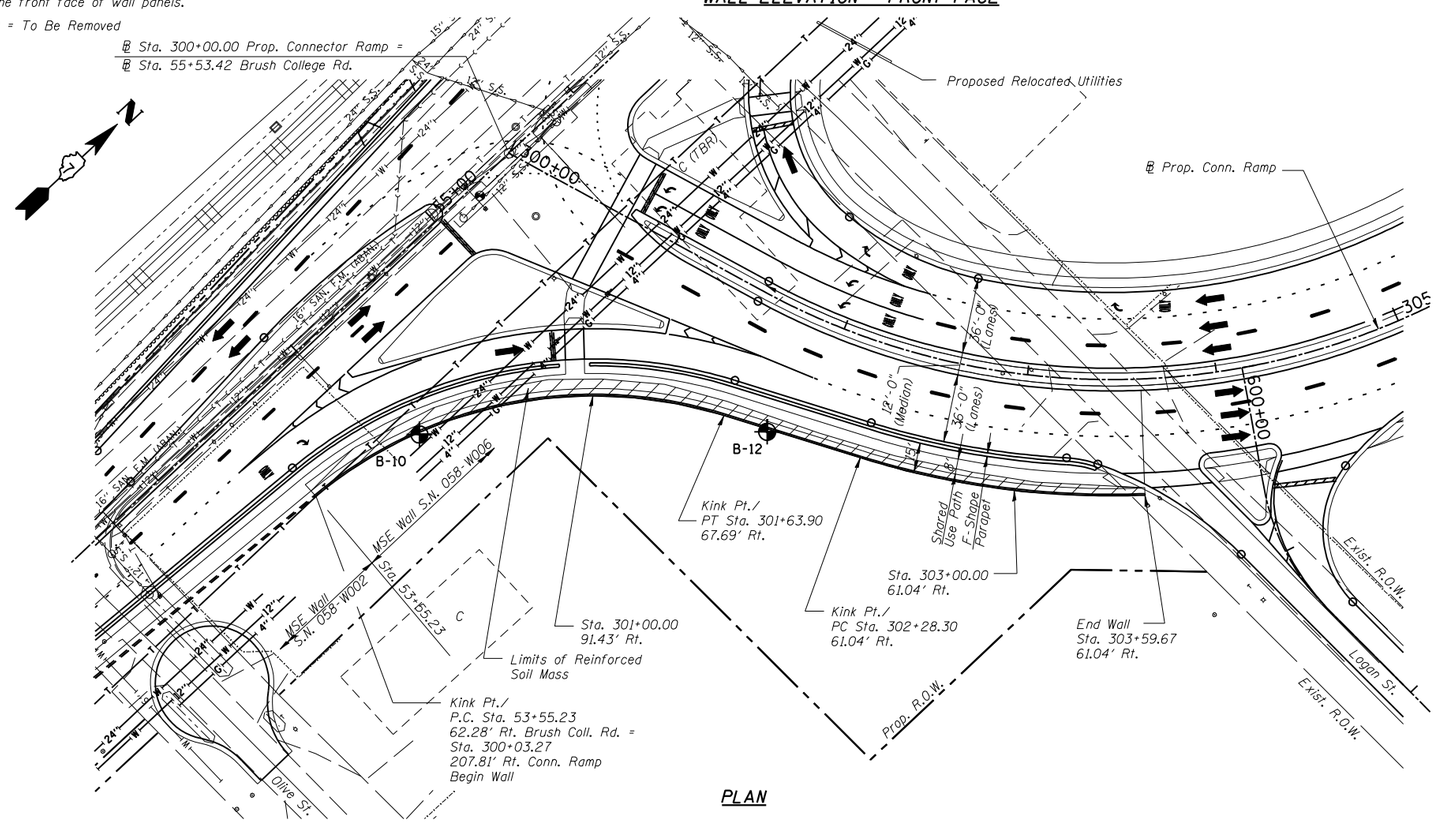
TBR = To Be Removed



PROFILE BRUSH COLLEGE ROAD



PROFILE CONNECTOR RAMP



PLAN

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class: Urban Minor Arterial
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DESIGN STRESSES

FIELD UNITS

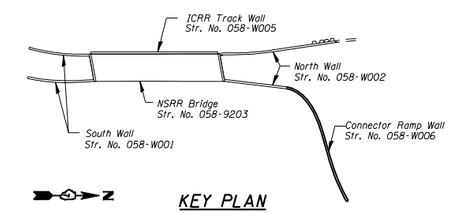
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST UNITS

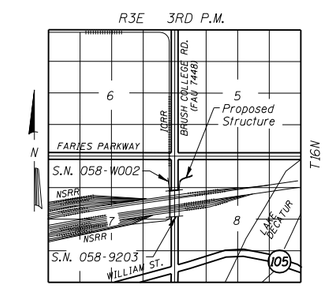
f'_c = 4,500 psi (Precast Panels)

PROP. CURVE FARCONN-2
CONNECTOR RAMP

PI STA. = 304+40.24
Δ = 73° 29' 07" (LT)
D = 14° 52' 55"
R = 385.00'
T = 287.42'
L = 493.78'
E = 95.45'
S.E. RUN = N/A
P.C. STA. = 301+52.83
P.T. STA. = 306+46.61



KEY PLAN

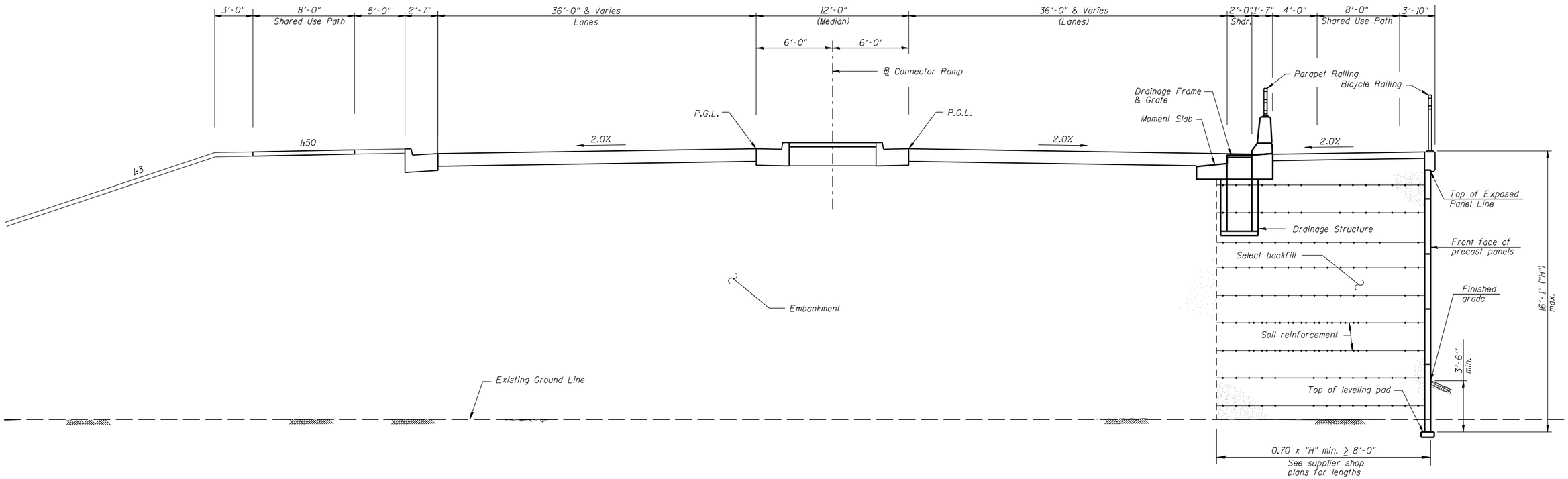


LOCATION SKETCH

GENERAL PLAN
FAU 7448 (BRUSH COLLEGE ROAD)
STA. 53+55.23 BRUSH COLLEGE RD. TO STA. 303+59.67 FARIES CONNECTOR RAMP
MACON COUNTY
STRUCTURE NO. 058-W006

URS	USER NAME =	DESIGNED - DCS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 2 SHEETS
		CHECKED - KWB	REVISED		
	PLOT SCALE =	DRAWN - DCS	REVISED		
	PLOT DATE =	CHECKED - KWB	REVISED		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON		
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



TYPICAL ROADWAY SECTION

TYPICAL SECTIONS AND DETAILS
FAU 7448 (BRUSH COLLEGE ROAD)
STA. 53+55.23 BRUSH COLLEGE RD. TO
STA. 303+59.67 FARIES CONNECTOR RAMP
MACON COUNTY
STRUCTURE NO. 058-W006

URS	USER NAME =	DESIGNED - DCS	REVISED
		CHECKED - KWB	REVISED
	PLOT SCALE =	DRAWN - DCS	REVISED
	PLOT DATE =	CHECKED - KWB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-00-BR	MACON		
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		