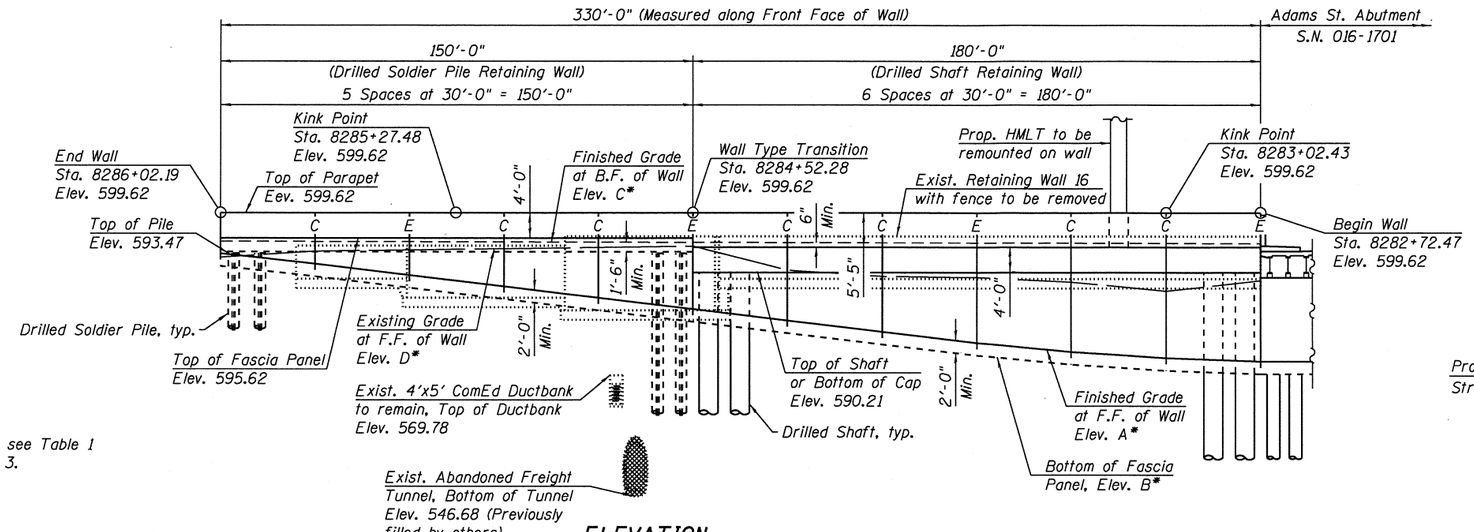
Bench Mark: Set "X" on east barrier wall of I-90 at ℄ of Adams Street. Elev. 581.17.

Existing Structure: Existing Retaining Wall 16. Constructed in 1957 under F.A.I. Route 2. Section 0101.6-2P. Cast-in-place concrete retaining wall on spread footing that measures 330'-0" from Adams Street south to Jackson Boulevard. Maximum height from top of wall to bottom of footing measures 13'-3". The existing retaining wall is to be removed and replaced.

Traffic on Jackson Exit Ramp will be detoured during construction.

No Salvage.

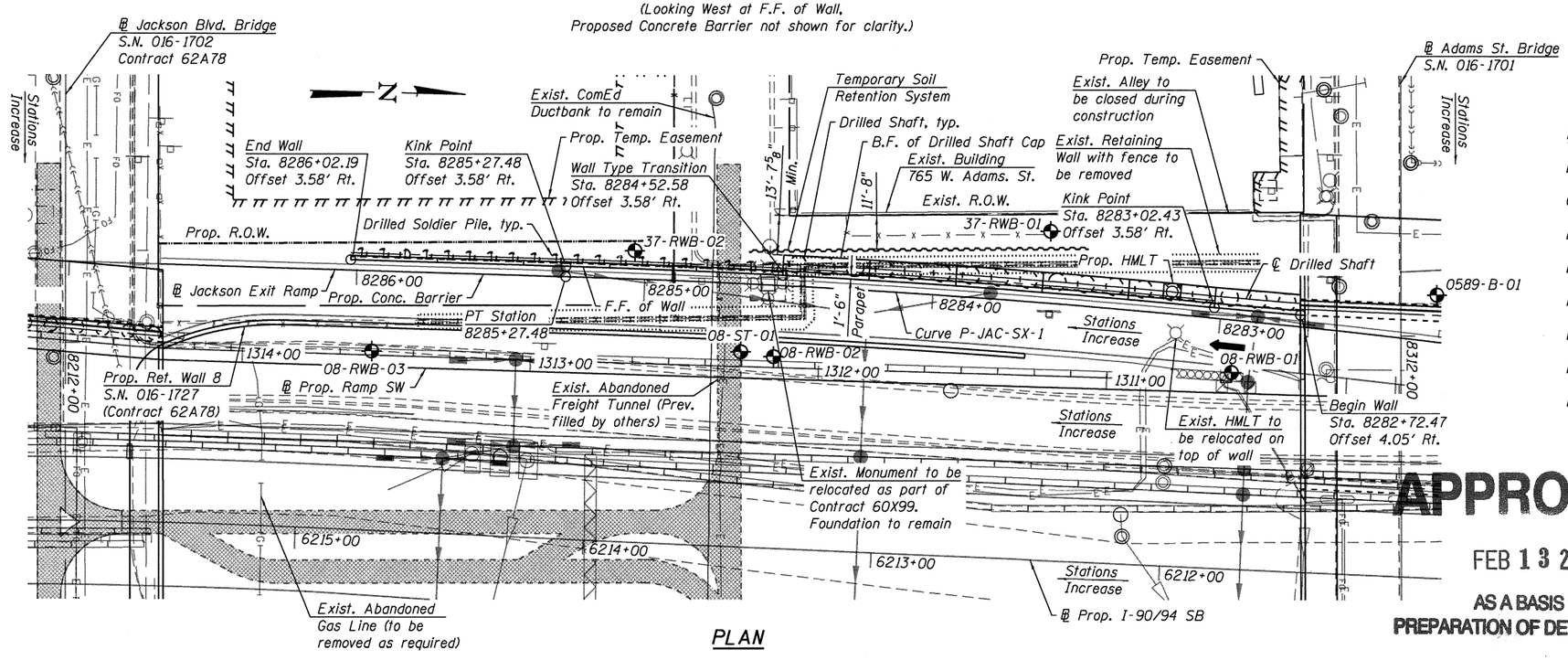
Notes:
1.) Wall offsets are measured from the ℄ of Jackson Exit Ramp to the front face of cast-in-place fascia panels.
2.) C denotes Construction Joint
3.) E denotes Expansion Joint
4.) F.F. denotes Front Face.
5.) B.F. denotes Back Face.
6.) Wall to be built along straight chords between kink points, construction joints, and expansion joints.
7.) Soldier Pile section, shaft diameter, spacing and tip elevation to be determined during final design.
8.) Proposed drainage information shown is conceptual and will be determined during final design.
9.) Soldier piles shall be spaced to avoid Existing ComEd Ductbank. Clearance requirements will be coordinated with ComEd during final design.



* For elevations, see Table 1 on Sheet 3 of 3.

ELEVATION

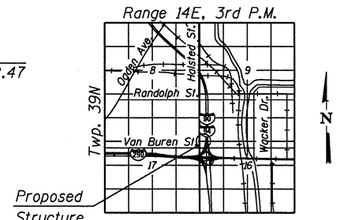
(Looking West at F.F. of Wall, Proposed Concrete Barrier not shown for clarity.)



PLAN

CURVE DATA

(Jackson Exit Ramp)
Prop. Curve P-JAC-SX-1
P.I. Sta. = 8283+78.27
Δ = 5° 01' 56"
D = 1° 41' 07"
R = 3,400.00'
T = 149.40'
L = 298.61'
E = 3.28'
e = 2.00%
T.R. = NA
S.E. Run = NA
P.C. Sta. = 8282+28.87
P.T. Sta. = 8285+27.48



LOCATION SKETCH

HIGHWAY CLASSIFICATION

Jackson Exit Ramp
Functional Class: Interstate
ADT: 2,900 (2012); 4,000 (2040)
ADTT: 0 (2012); 0 (2040)
DHV: 410 (2040)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
One-Way Traffic
Directional Distribution: 100%

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications 8th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 7,000 psi (Drilled Shafts)**
f'c = 3,500 psi (All other concrete)
fy = 60,000 psi (Reinforcement)

SOLDIER PILES

fy = 50,000 psi (AASHTO M270 Gr. 50)

** Final concrete strength will be determined during final design

WALL DEFLECTION CRITERIA:

Maximum total lateral wall deflection at top of wall: 1 inch.

SUGGESTED SEQUENCE OF CONSTRUCTION

1.) Install temporary soil retention system along alley.
2.) Remove portion of Existing Retaining Wall 16 that is in conflict with the proposed drilled shafts.
3.) Drill shafts and install soldier piles.
4.) Remove portion of Existing Retaining Wall 16 in front of the proposed wall and excavate to install timber lagging.
5.) Install drainage structures along Jackson Exit Ramp.
6.) Construct concrete fascia panels, cap, and parapet.

LEGEND:

Ex. Chain Link Fence	— X — X —	Soil Boring	⊕
Combined Sewer	→→→→→→→→	Existing Catch Basin	○
Electric	——E——	Proposed Catch Basin	●
Ex. Storm Sewer		Existing Manhole	◎
Prop. Storm Sewer		Proposed Manhole	◉
Ex. ITS Cable	— — — —	Proposed Inlet	▬
Ex. Gas Line	——G——		
Ex. Fiber Optic	——FO——		

APPROVED
FEB 13 2019
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN
RETAINING WALL 37 ALONG JACKSON EXIT RAMP
F.A.I. RTE. 90/94 (KENNEDY EXPRESSWAY)
SECTION 2014-015 R&B-R
COOK COUNTY
STATION 8282+72.47 TO STATION 8286+02.19
STRUCTURE NO. 016-1826

TranSystems

USER NAME = wjcolletti	DESIGNED - WJC	REVISED -	
	CHECKED - JM/MDS	REVISED -	
PLOT SCALE = 48.0000 '/ in.	DRAWN - WJC	REVISED -	
PLOT DATE = 11/29/2018	CHECKED - JM/MDS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	3	1
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

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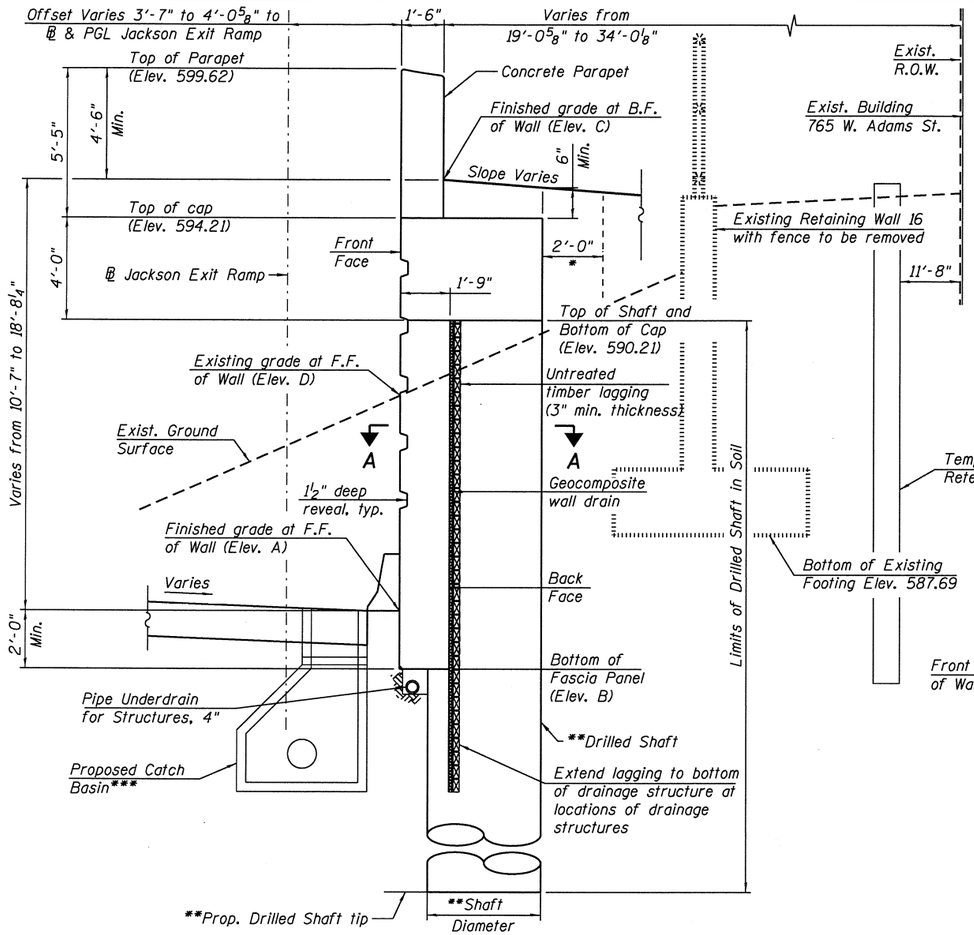
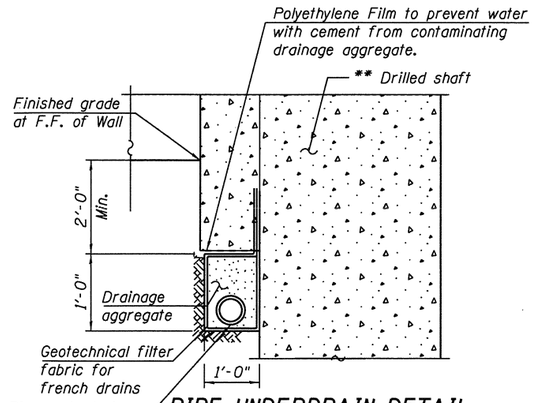
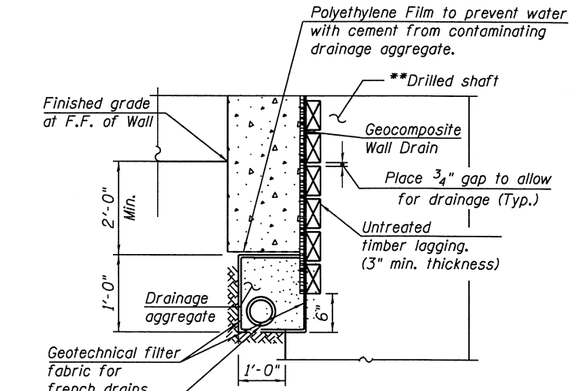


TYPICAL CROSS SECTION - DRILLED SHAFT WALL

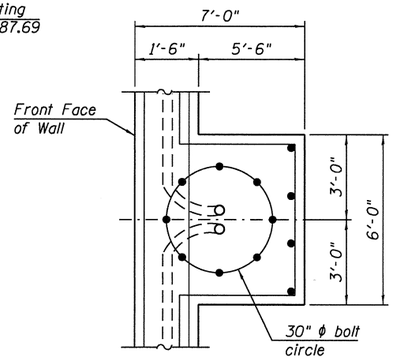
(Looking Upstation)
(Sta. 8282+72.47 to Sta. 8284+52.28)



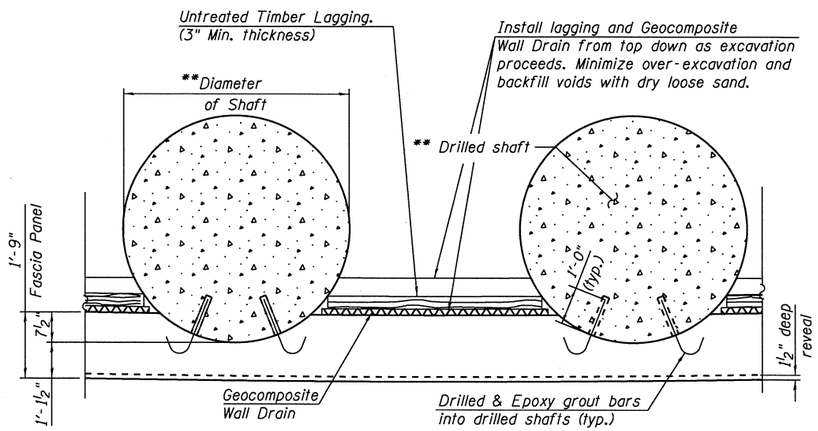
PIPE UNDERDRAIN DETAIL AT DRILLED SHAFT



PIPE UNDERDRAIN DETAIL BETWEEN DRILLED SHAFTS

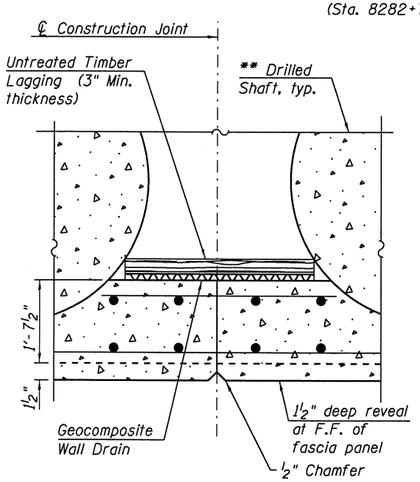


PARAPET DETAIL AT HMLT

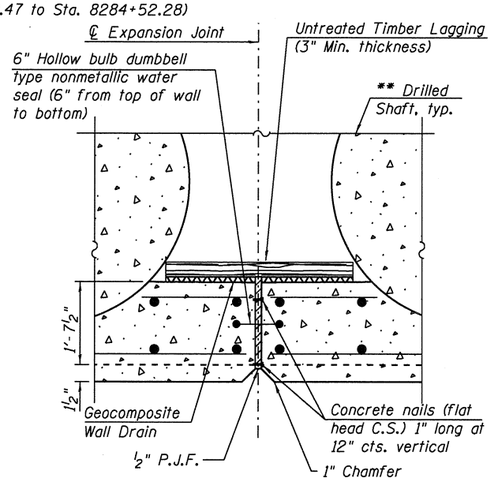


SECTION A-A

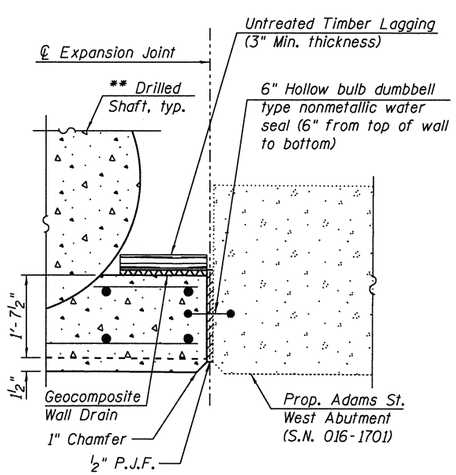
(Shaft Reinforcement not shown for clarity)



CONSTRUCTION JOINT DETAILS



EXPANSION JOINT DETAILS



EXPANSION JOINT DETAILS

* Limits of Structure Excavation

** Drilled shaft diameter, spacing and tip elevation to be determined during final design.

*** Size, location, and invert elevations of catch basin shall be determined in final design.

LEGEND:

B.F. - denotes Back Face.
E.F. - denotes Each Face.
F.F. - denotes Front Face.

APPROVED

FEB 13 2019

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DRILLED SHAFT WALL DETAILS
RETAINING WALL 37 ALONG JACKSON EXIT RAMP
F.A.I. RTE. 90/94 (KENNEDY EXPRESSWAY)
SECTION 2014-015 R&B-R
COOK COUNTY
STATION 8282+72.47 TO STATION 8286+02.19
STRUCTURE NO. 016-1826

TranSystems	USER NAME = wjcolletti	DESIGNED - WJC	REVISED -
		CHECKED - JM/MDS	REVISED -
	PLOT SCALE = 0.17 ' / in.	DRAWN - WJC	REVISED -
	PLOT DATE = 11/29/2018	CHECKED - JM/MDS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	3	2
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

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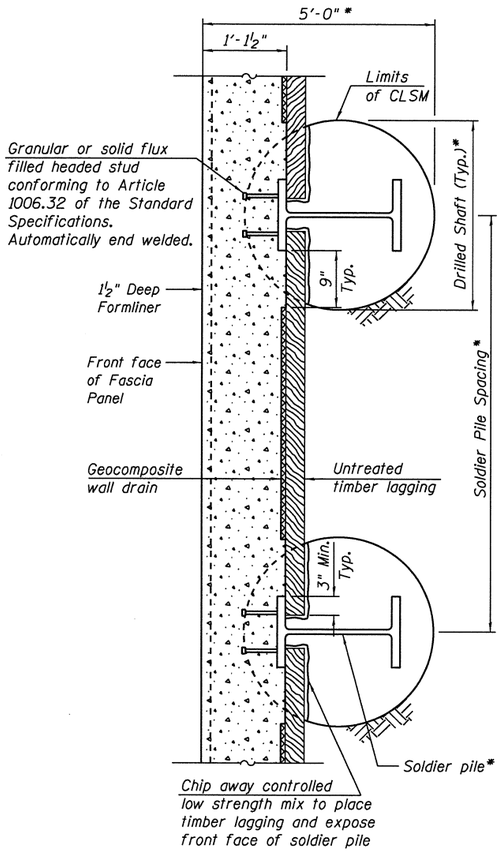
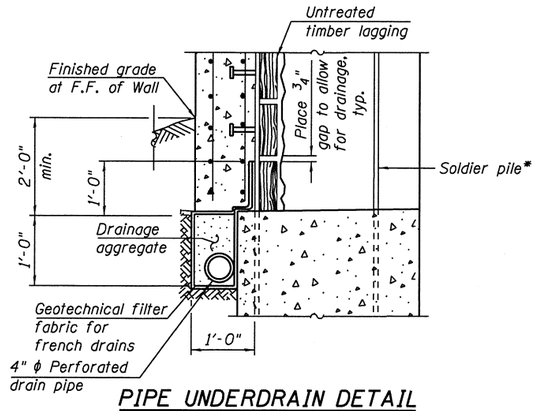
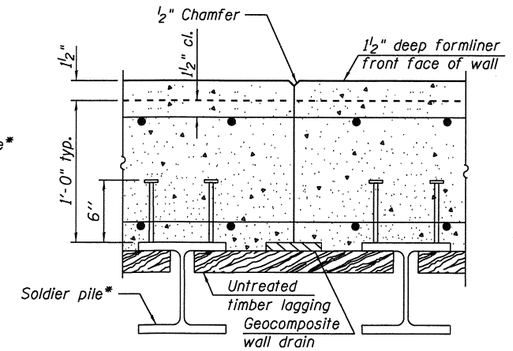


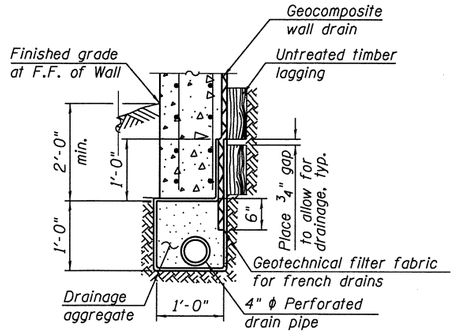
SECTION B-B



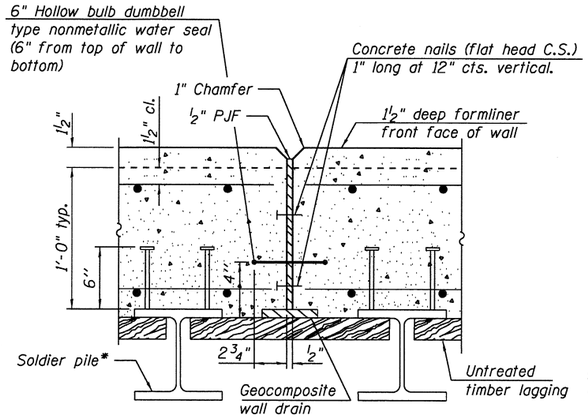
PIPE UNDERDRAIN DETAIL AT SOLDIER PILE



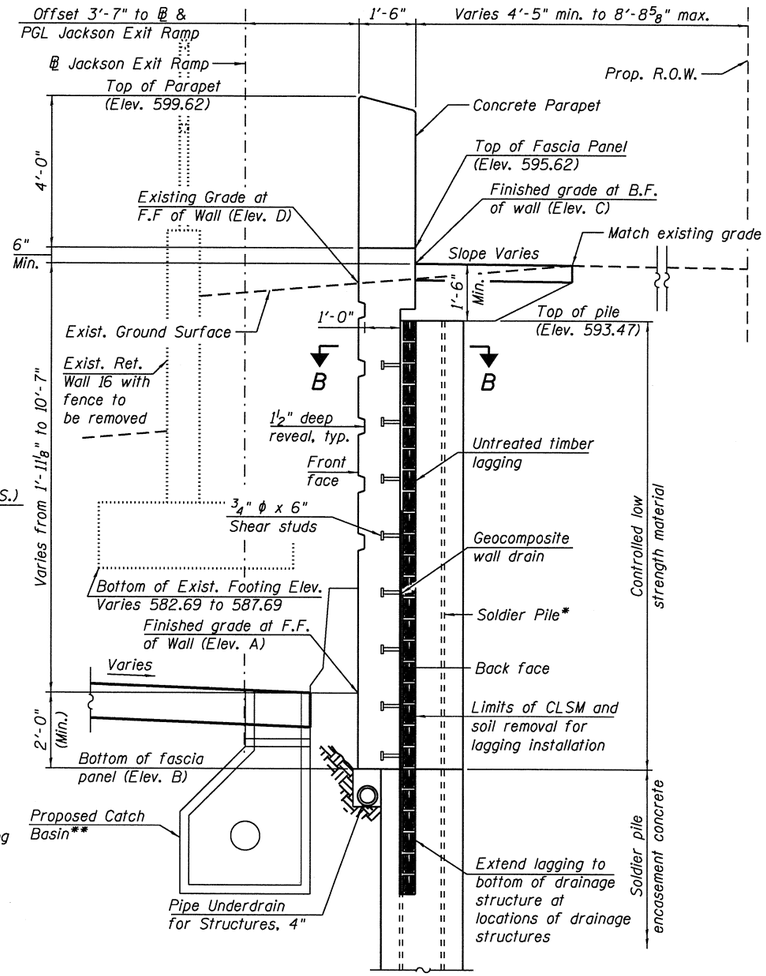
CONSTRUCTION JOINT DETAILS



PIPE UNDERDRAIN DETAIL BETWEEN SOLDIER PILES



EXPANSION JOINT DETAILS



TYPICAL CROSS SECTION - SOLDIER PILE WALL

(Looking upstation)
(Sta. 8284+52.28 to Sta. 8286+02.19

* Soldier Pile section, shaft diameter, spacing, and tip elevation to be determined during final design.

** Size, location, and invert elevations of catch basin shall be determined in final design.

TABLE 1 - WALL ELEVATIONS

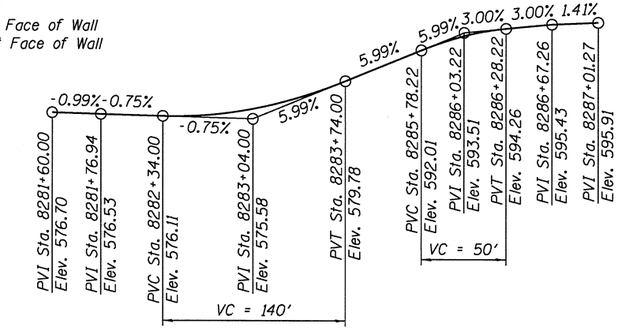
	Station	Offset	Elevation A	Elevation B	Elevation C	Elevation D	Wall Type
	8282+72.47	4.05' Rt.	576.10	574.10	594.79	588.91	Drilled Shafts Wall
	8283+02.43	3.58' Rt.	576.64	574.64	594.82	587.25	
	8283+32.40	3.58' Rt.	577.62	575.62	594.85	588.70	
	8283+62.37	3.58' Rt.	579.03	577.03	594.88	589.41	
	8283+92.34	3.58' Rt.	580.80	578.80	594.91	589.58	
	8284+22.31	3.58' Rt.	582.59	580.59	594.94	590.58	
*	8284+52.28	3.58' Rt.	584.39	582.39	594.97	594.37	
**	8284+52.28	3.58' Rt.	584.39	582.39	594.97	594.37	Drilled Soldier Pile Wall
	8284+82.24	3.58' Rt.	586.18	584.18	595.00	594.16	
	8285+12.21	3.58' Rt.	587.98	585.98	595.03	593.97	
	8285+27.48	3.58' Rt.	588.89	586.89	595.05	593.86	
	8285+42.19	3.58' Rt.	589.77	587.77	595.06	593.76	
	8285+72.19	3.58' Rt.	591.57	589.57	595.09	593.56	
	8286+02.19	3.58' Rt.	593.20	591.20	595.12	592.58	

Elevation A- Finished Grade at Front Face of Wall
Elevation B- Bottom of Fascia Panel
Elevation C- Finished Grade at Back Face of Wall
Elevation D- Existing Grade at Front Face of Wall
* Elevations just to the right of joint
** Elevations just to the left of joint

APPROVED

FEB 13 2019

AS A BASIS FOR PREPARATION OF DETAILED PLANS



PROFILE GRADE

(℄ Jackson Exit Ramp)

DRILLED SOLDIER PILE WALL DETAILS
RETAINING WALL 37 ALONG JACKSON EXIT RAMP
F.A.I. RTE. 90/94 (KENNEDY EXPRESSWAY)
SECTION 2014-015 R&B-R
COOK COUNTY
STATION 8282+72.47 TO STATION 8286+02.19
STRUCTURE NO. 016-1826

USER NAME = wjcolletti	DESIGNED - WJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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PLOT DATE = 11/29/2018	CHECKED - JM/MDS	REVISED -	

SHEET NO. 3 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	3	3
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

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