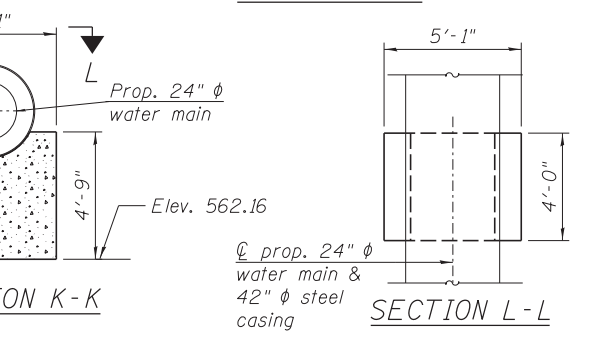
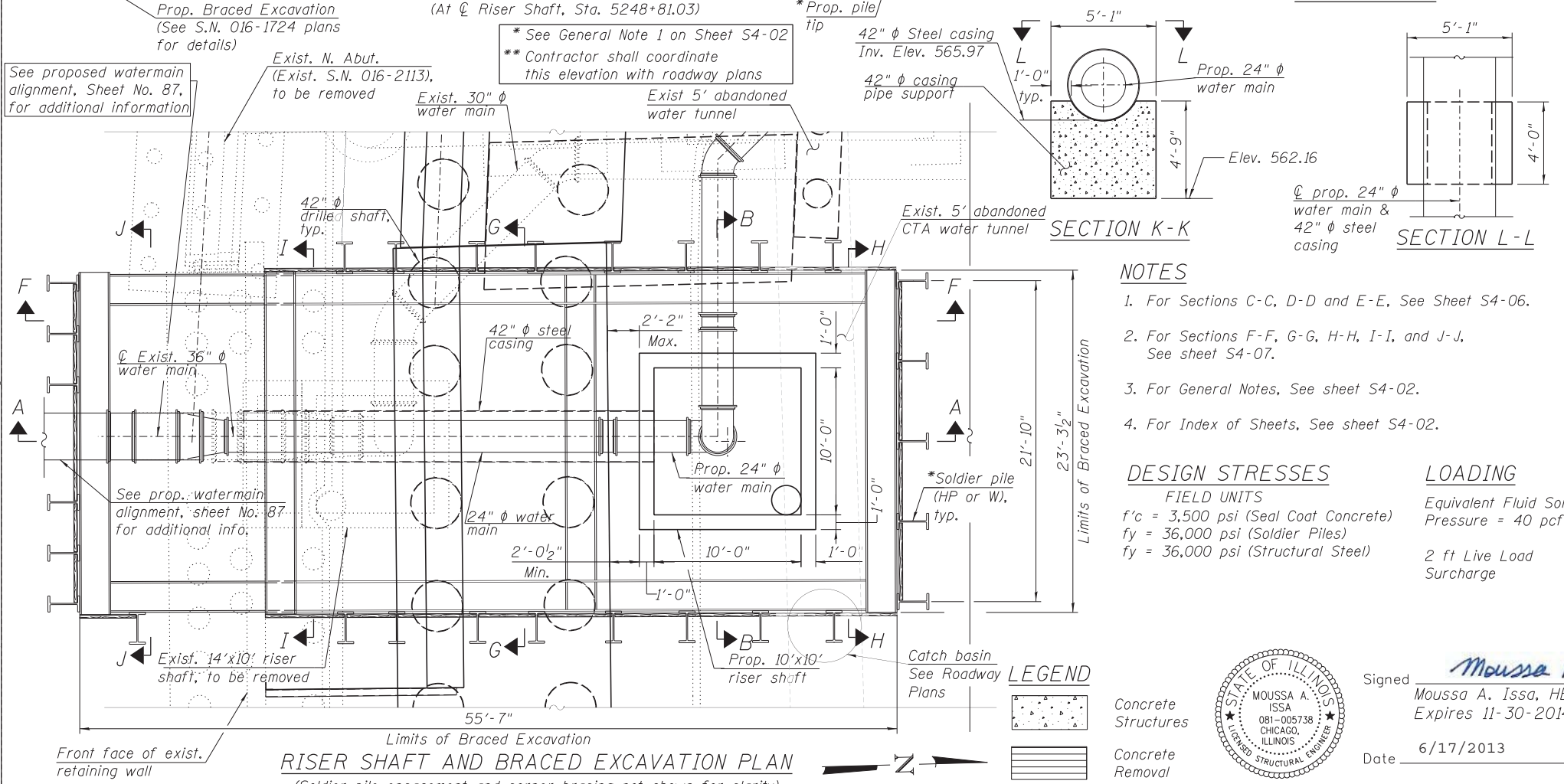


SUGGESTED CONSTRUCTION SEQUENCE

1. Shut down the water main to allow for new construction.
2. Construct braced excavation support system for existing riser shaft removal, existing water main extension, new riser shaft construction and new wall construction.
3. Remove the existing riser shaft and existing water main interfering with the new construction.
4. Assemble the 24" ϕ water main horizontal portion and install it into the 42" ϕ casing pipe. (At Invert Elevation 565.97).
5. Construct the concrete foundation shown in Section K-K and L-L.
6. Install the assembled water main and casing, assembled in Item 4, in its final position to bear on the concrete foundation supports.
7. Connect the new 24" ϕ water main of Item 4 to the existing 36" ϕ water main.
8. Construct the riser shaft bottom slab and walls.
9. Backfill the braced excavation up to the bottom of the new wall footing (at Elev. 570.24) around the new riser shaft with approved structural backfill.
10. Install the braced excavation required for construction of Retaining Wall 5 (S.N. 016-1724) and the north abutment of Morgan Street Bridge (S.N. 016-1709).
11. Remove the wood lagging between the piles interfering with new abutment and wall construction on the west and east walls of the riser shaft braced excavation to allow construction of Retaining Wall 5 and the north abutment of Morgan Street Bridge.
12. Install the drilled shafts for Retaining Wall 5 (S.N. 016-1724).
13. Construct the new retaining wall.
14. Construct the north abutment.
15. Re-install the removed timber lagging and backfill behind the north abutment and wall up to the bottom of the proposed sub-base material.
16. Backfill the braced excavation portion existing to the north of the new wall to Elevation 584.94 (1' below the bottom of the new water main running thru the top of the west wall of the riser shaft).
17. Remove the existing retaining wall to the limits shown on the removal plans, cut braced excavation piles, walers and struts to the south of the proposed Retaining Wall 5, patch strut holes in new retaining wall and backfill in front of new wall as required.
18. Excavate as required, outside the limits of the braced excavation on Morgan Street, for the installation of the connection to the 30" ϕ water main on Morgan Street and construct thrust restrainers.
19. Install the remaining portion of the 24" ϕ water main inside the riser shaft and the connection portion to the 30" ϕ water main on Morgan Street.



NOTES

1. For Sections C-C, D-D and E-E, See Sheet S4-06.
2. For Sections F-F, G-G, H-H, I-I, and J-J, See sheet S4-07.
3. For General Notes, See sheet S4-02.
4. For Index of Sheets, See sheet S4-02.

DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi (Seal Coat Concrete)
 $f_y = 36,000$ psi (Soldier Piles)
 $f_y = 36,000$ psi (Structural Steel)

LOADING

Equivalent Fluid Soil Pressure = 40 pcf
 2 ft Live Load Surcharge

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Trench Backfill	CU YD	874
Concrete Removal	CU YD	72.9
Concrete Structures	CU YD	61.5
Reinforcement Bars, Epoxy Coated	POUND	16,970
Drilling and Setting Soldier Piles (in Soil)	CU FT	1,358
Braced Excavation	CU YD	1,221
Furnishing Soldier Piles (HP Section)	FOOT	212

LEGEND

- Concrete Structures
- Concrete Removal

Signed: *Moussa A. Issa*
 Moussa A. Issa, HBM Il. Lic. No. 081-005738
 Expires 11-30-2014
 Date: 6/17/2013 For Sheets S4-01 Thru S4-08

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D160W25-Sht-RS01-GenPlan&Sections.dgn
 USER NAME = will.mar.douss
 PLOT SCALE = 5.0000' / in.
 PLOT DATE = 6/14/2013

DESIGNED - MI, WM
 DRAWN - WM
 CHECKED - MAI, MI, JJS
 DATE - 6/17/2013

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND SECTIONS
 RISER SHAFT AND BRACED EXCAVATION**

SCALE: SHEET S4-01 OF 8 SHEETS STA. TO STA.
 F.A.I. R.E. 90/94/290 SECTION 2013-007R COUNTY COOK TOTAL SHEETS 317 SHEET NO. 225 CONTRACT NO. 60W25 ILLINOIS FED. AID PROJECT