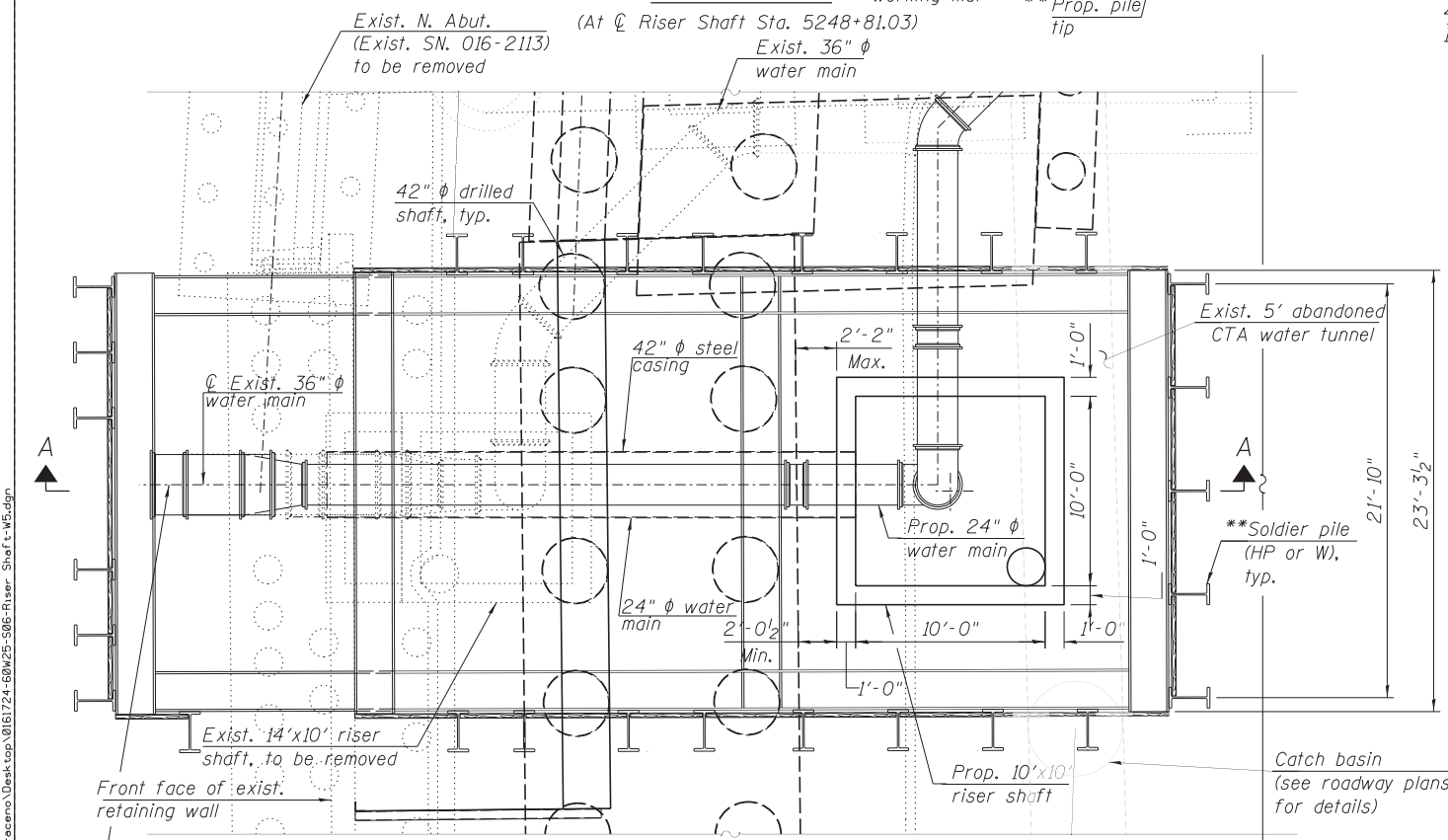


SECTION A-A



RISER SHAFT AND BRACED EXCAVATION PLAN
(Soldier pile encasement and corner bracing not shown for clarity)

NOTES:

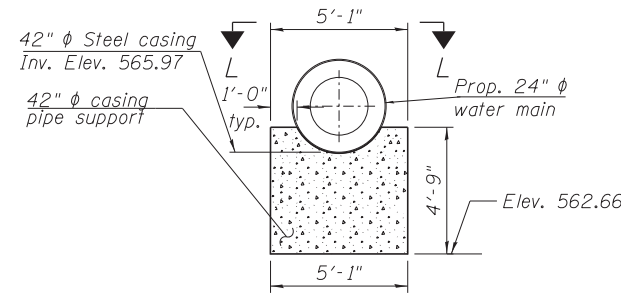
- The braced excavation support system for the riser shaft construction layout and details is a suggested option. The suggested construction sequence enables the Contractor to construct the braced excavation support system for existing riser shaft removal, existing water main connection removal and new riser shaft and new wall construction. The Contractor shall design the braced excavation consisting of drilled soldier piles, wood lagging and structural steel sections (struts and walers) to meet the City of Chicago Office of Underground coordination (OUC) building requirement. The design shall be performed and sealed by a Structural Engineer, licensed and registered in the State of Illinois, and shall be approved by the Engineer.
- The portion of the existing abandoned CTA water tunnel interfering with the new riser shaft construction shall be removed.
- If the 5' abandoned CTA water tunnel is encountered during drilling for the soldier piles for the braced excavation, concrete coring shall be used (if required).

* Cost included with "Pipe Underdrains for Structures, 6".

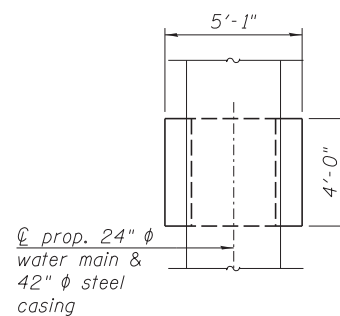
** Pile section, spacing, tip elevation shaft diameter, and limits to be determined during braced excavation design, to be performed by the contractor.

SUGGESTED CONSTRUCTION SEQUENCE

- Shut down the water main to allow for new construction.
- Construct braced excavation support system for existing riser shaft removal, existing water main extension, new riser shaft construction and new wall construction.
- Remove the existing riser shaft and existing water main interfering with the new construction.
- Assemble the 24" ϕ water main horizontal portion and install it into the 42" ϕ casing pipe (at Invert Elevation 565.97).
- Construct the concrete foundation shown in Section B-B and C-C.
- Install the assembled water main and casing, assembled in Item 4, in its final position to bear on the concrete foundation supports.
- Connect the new 24" ϕ water main of Item 4 to the existing 36" ϕ water main.
- Construct the riser shaft bottom slab and walls.
- 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.
- 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).
- 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.
- Install the drilled shafts for Retaining Wall 5 (S.N. 016-1724).
- Construct the new retaining wall.
- Construct the north abutment.
- Re-install the removed timber lagging and backfill behind the north abutment and wall up to the bottom of the proposed sub base material.
- 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).
- 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.
- 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.
- 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.
- Construct the top slab of the riser shaft.
- Construct the manhole and Chicago standard frame and lid.
- Backfill to the final elevation to allow for the construction of a temporary pavement and subbase material (see civil plans for details).
- Cut off and remove the braced excavation support system to a depth which will not interfere with new construction, or a minimum of 2' below finished grade.
- Construct pavement and curb and gutter within limits of construction. See pavement removal and construction plans.



SECTION B-B



SECTION C-C

LEGEND

- Concrete Structures
- Concrete Removal

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS AND DETAILS - WALL AT RISER SHAFT
STRUCTURE NO. 016-1724

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	201
CONTRACT NO. 60W25			ILLINOIS FED. AID PROJECT	

SCALE: SHEET S2-06 OF 7 SHEETS STA. TO STA.

HBM
ENGINEERING GROUP, LLC
CONSULTING & DESIGN
INSPECTION & RATING
RESEARCH & TESTING

0161724-60W25-S06-Riser Shaft-W5.dgn
USER NAME = john.saraceno
PLOT SCALE = 5.0000' / in.
PLOT DATE = 6/14/2013

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

REVISED -
REVISED -
REVISED -
REVISED -